

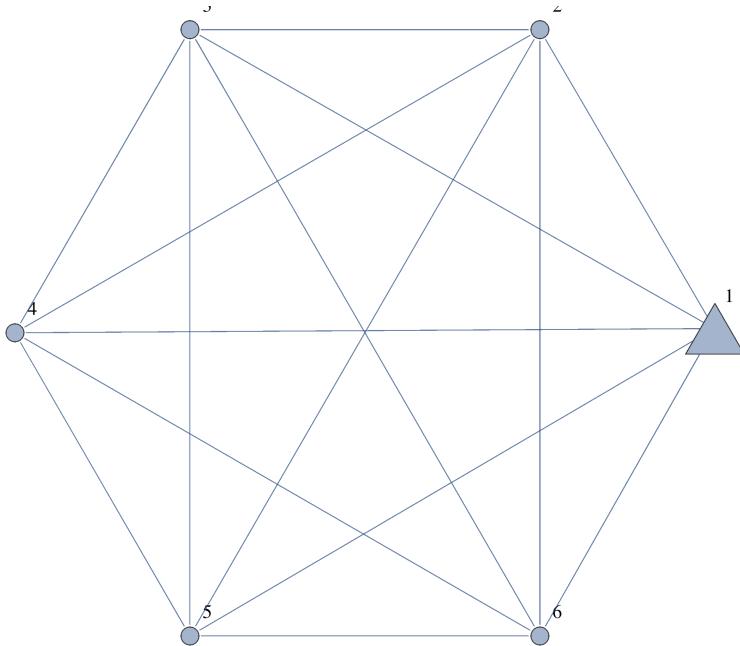
# The K<sub>6</sub> with arbitrary weight

---

## Start of the game

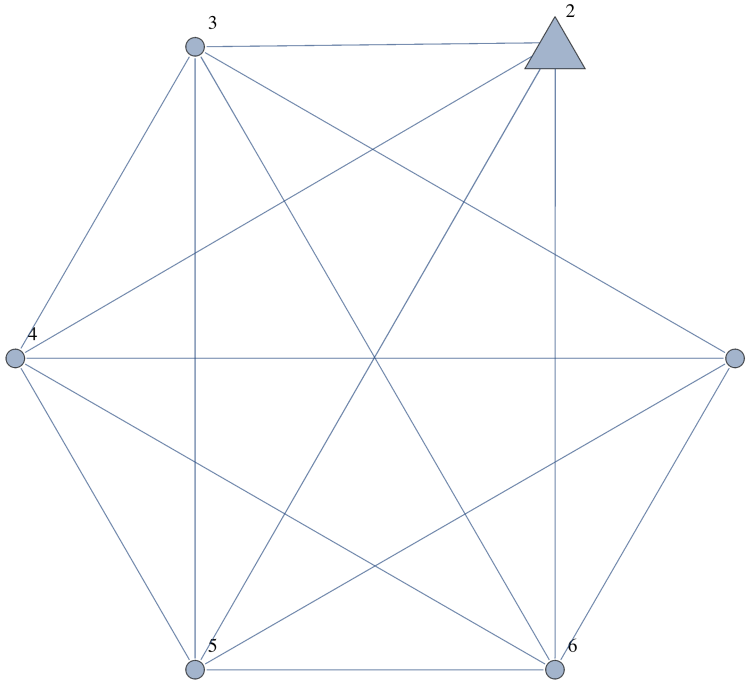
### ■ Player 1's Turn

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 2, 1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6,  
  2 ↔ 3, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

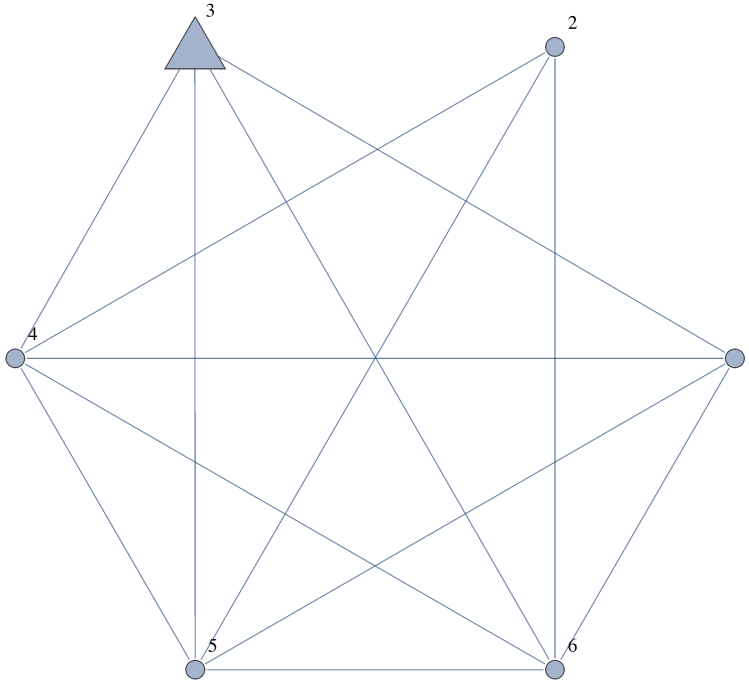
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6,  
  2 ↔ 3, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 1's Turn

(0)

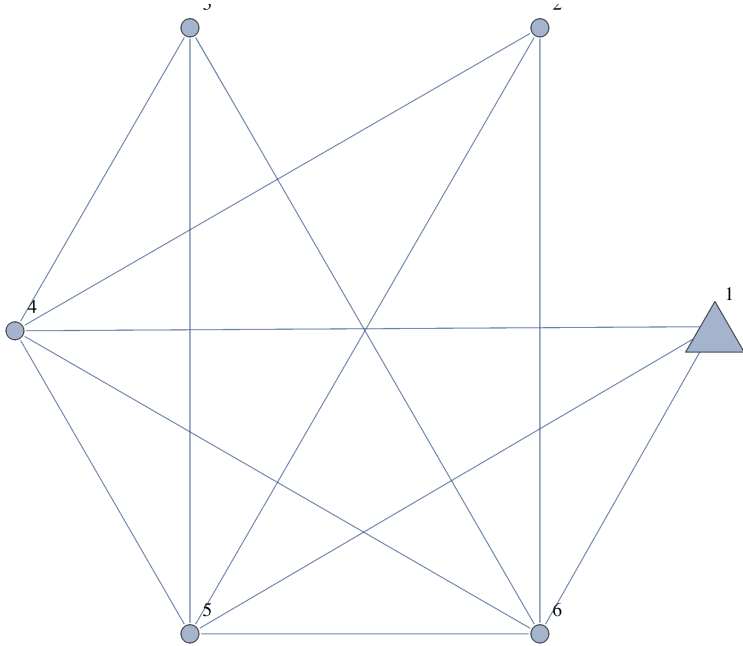
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6,  
  2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(0)

```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

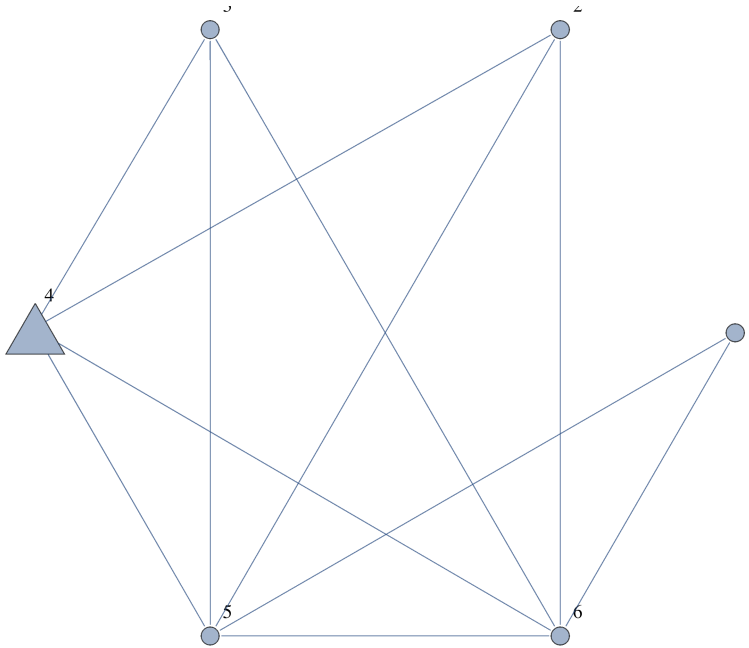


■ Player 1's Turn

(00)



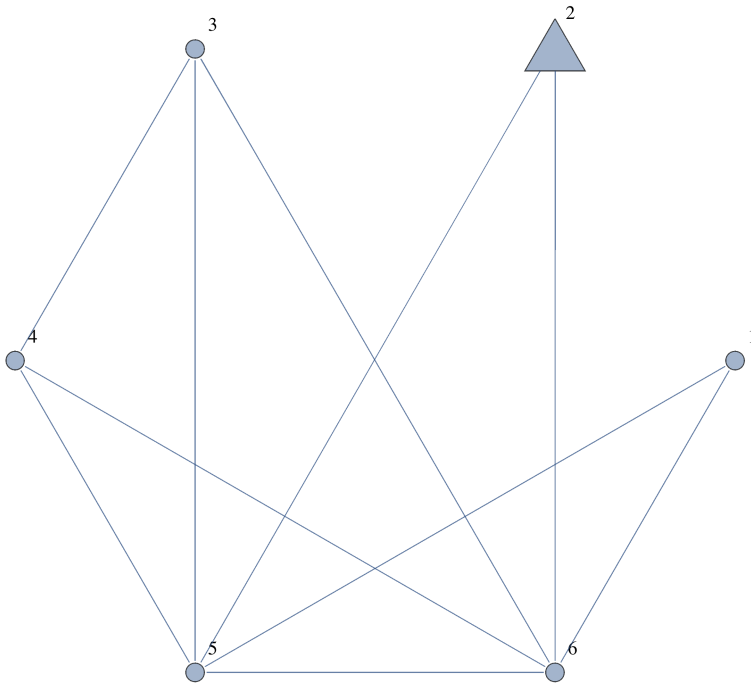
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 5, 1 ↔ 6, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},  
  VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(00)

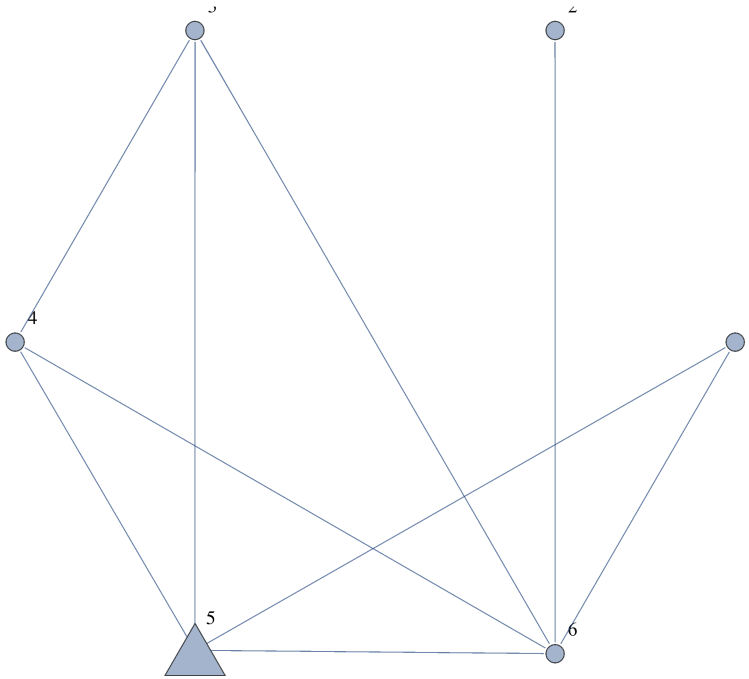
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(000)

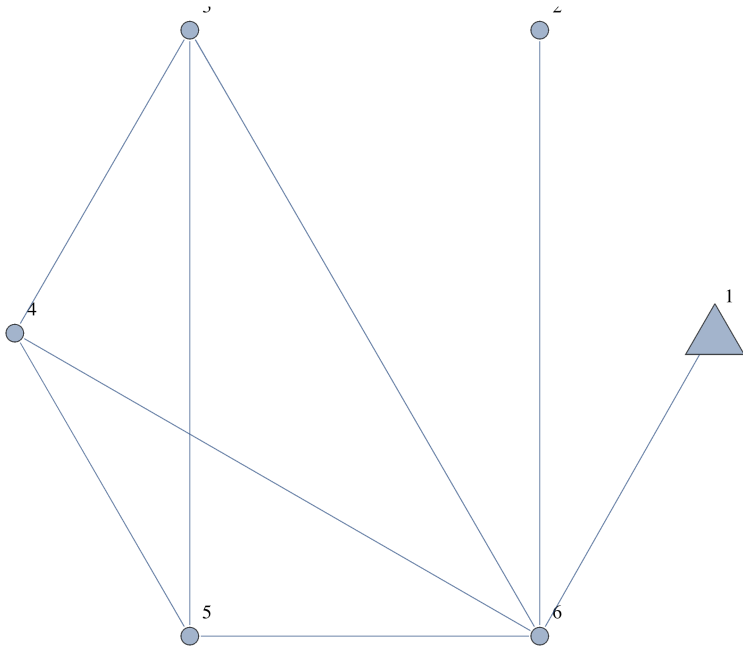
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(000)

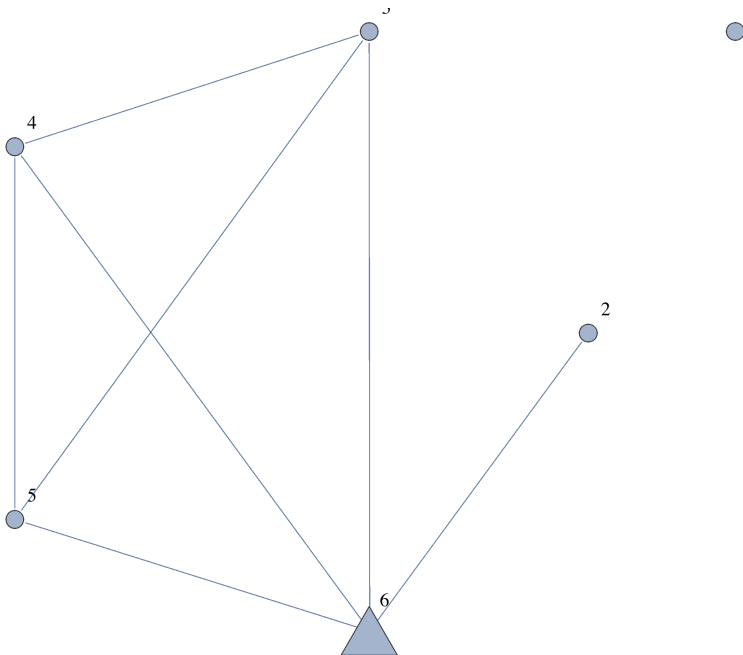
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 6, 2 -> 6, 3 -> 4, 3 -> 5, 3 -> 6, 4 -> 5, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(0000)

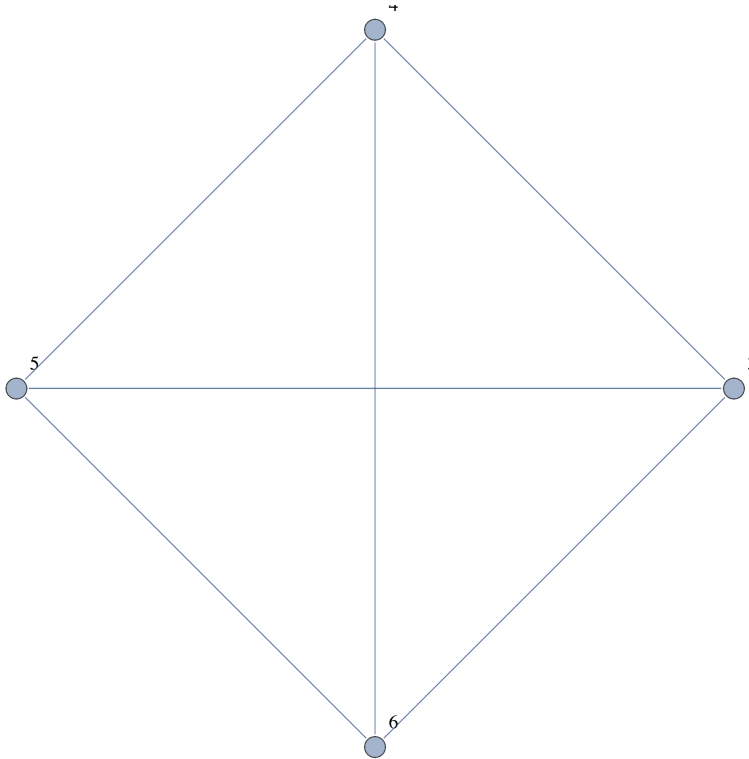
```
Graph[{1, 2, 3, 4, 5, 6}, {2 -> 6, 3 -> 4, 3 -> 5, 3 -> 6, 4 -> 5, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(0000)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



1

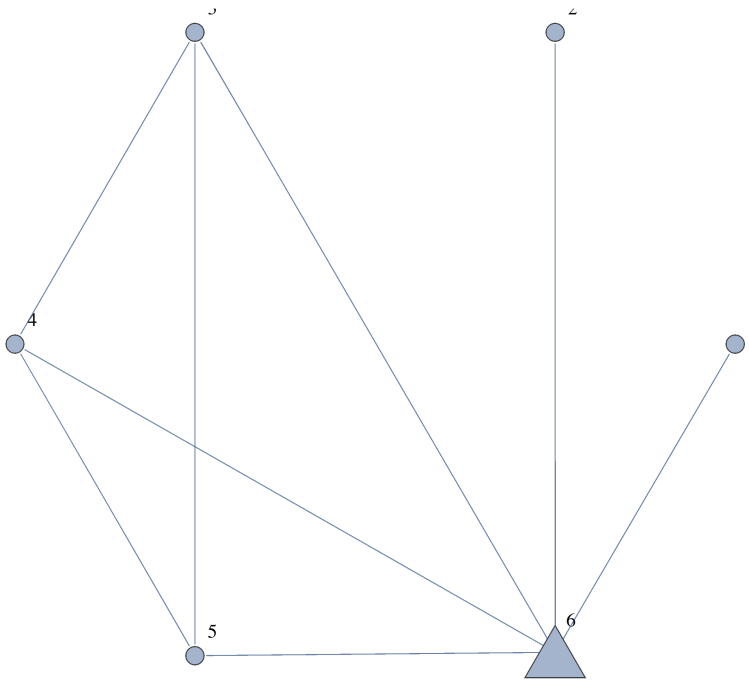
2

Player 2 lost!

### ■ Player 1's Turn

(000+)

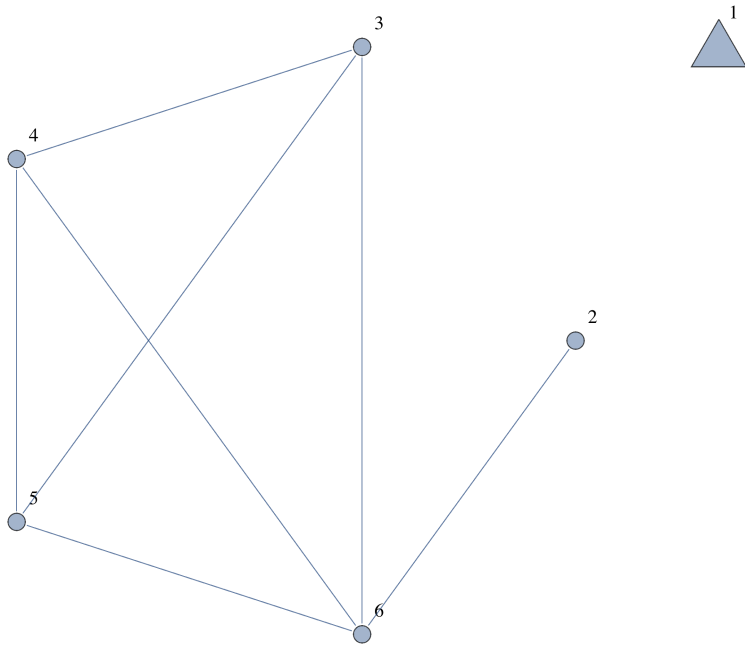
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(000+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

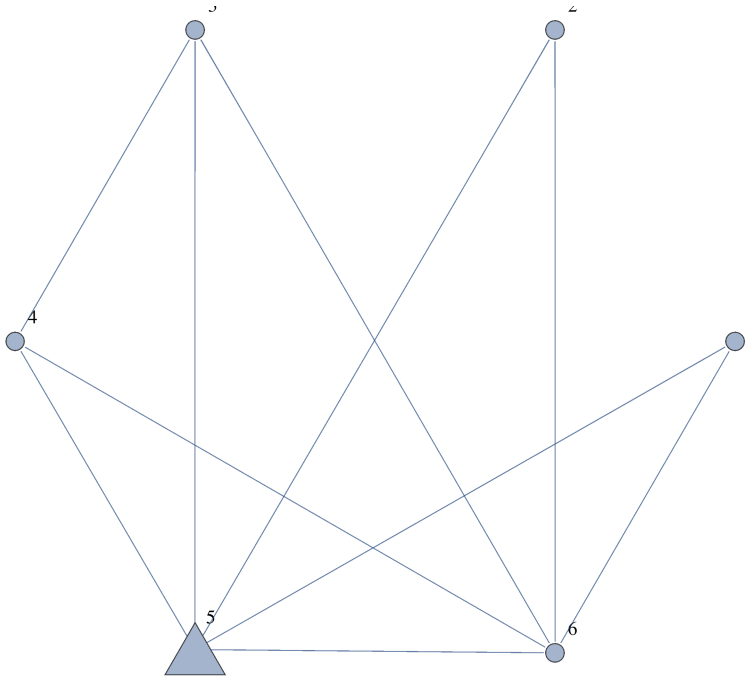


Player 2 lost!

■ **Player 1's Turn**

(00+)

```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

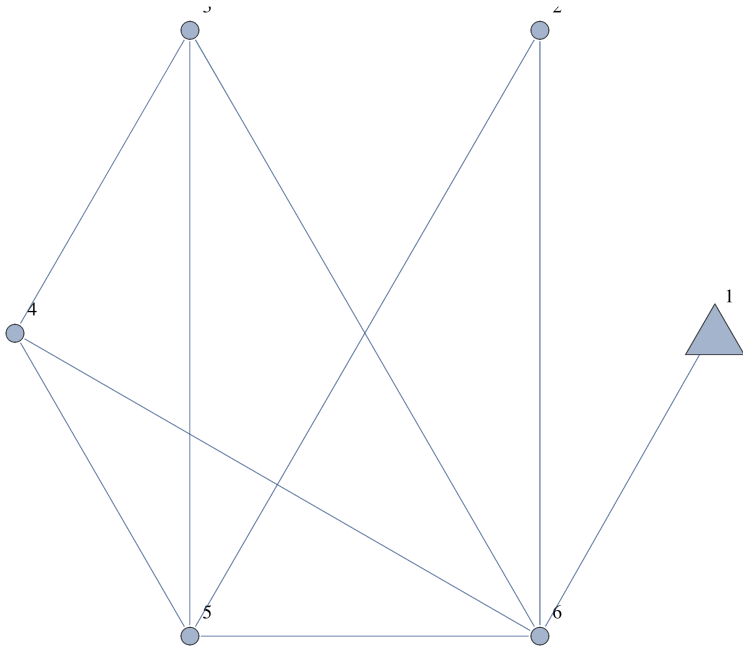


■ Player 2's Turn

(00+)



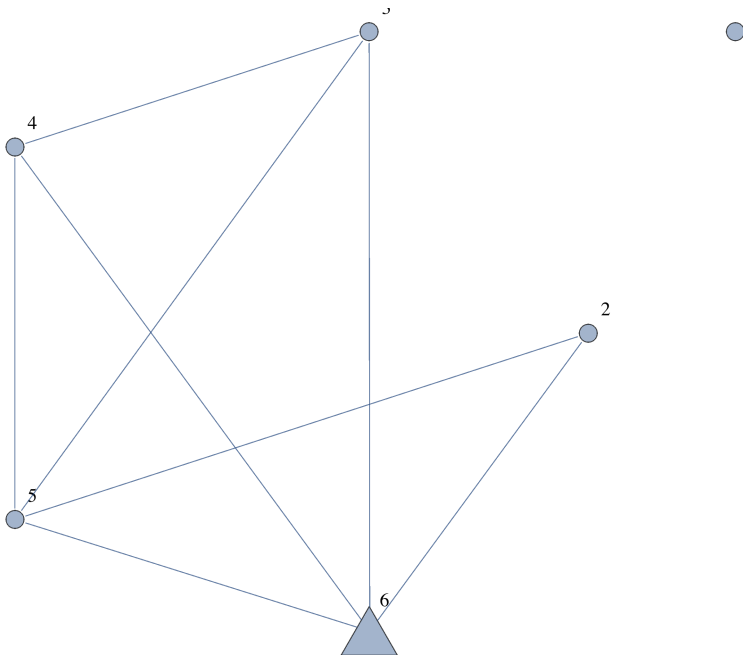
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(00+0)

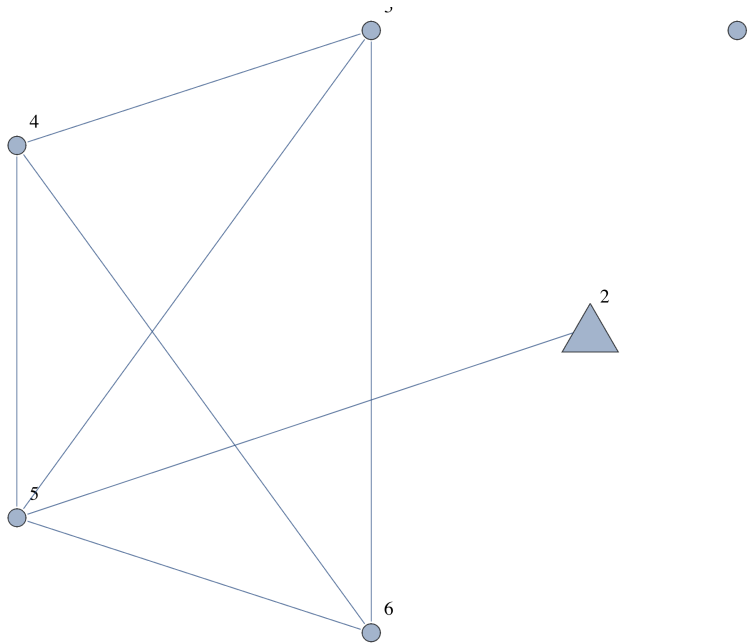
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(00+0)

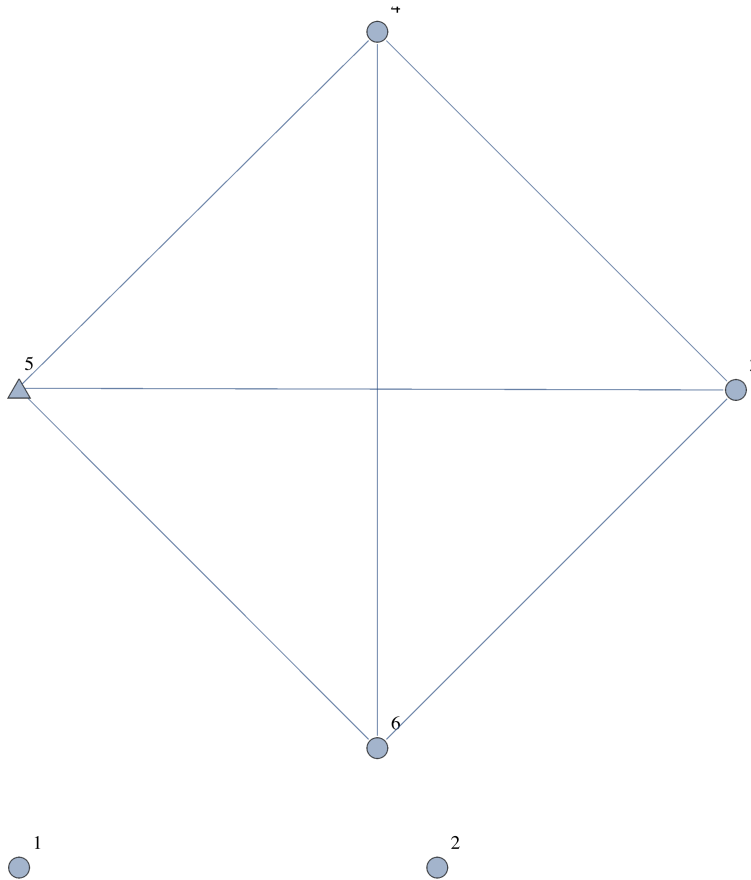
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 1's Turn**

(00+00)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

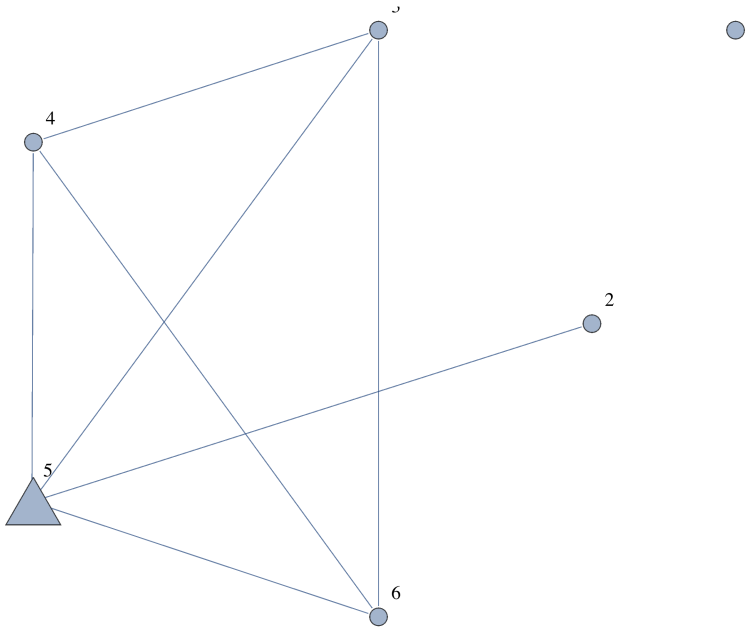


What remains is a  $K_4$ . Since the first player to play a  $K_4$  wins, Player 1 will win this game. Hence, Player 2 lost!

#### ■ Player 1's Turn

(00+0+)

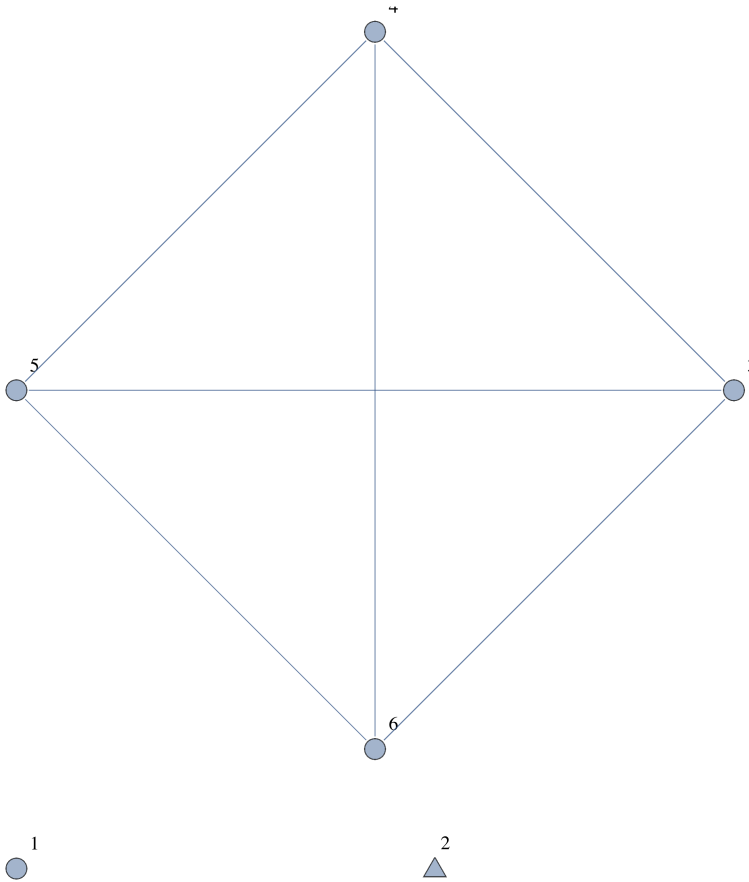
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(00+0+)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

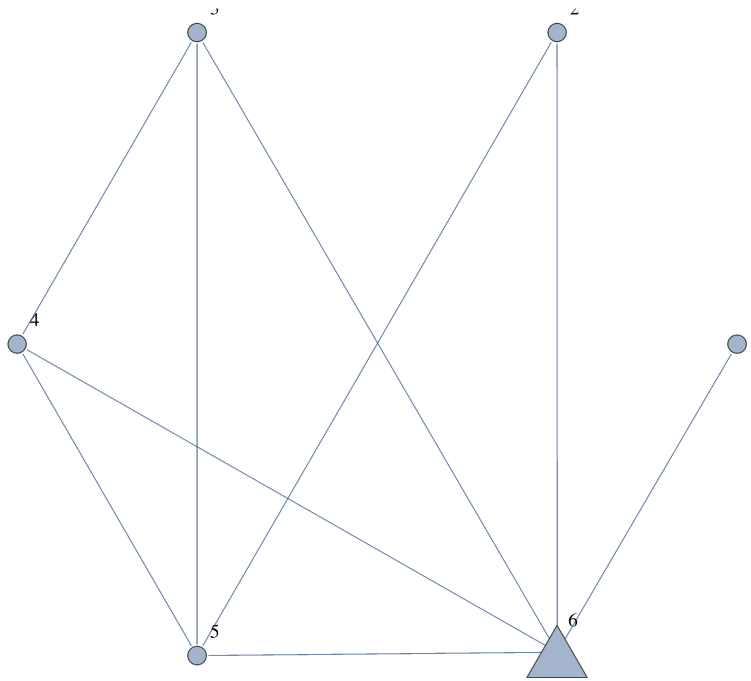


Player 2 lost!

■ **Player 1's Turn**

(00++)

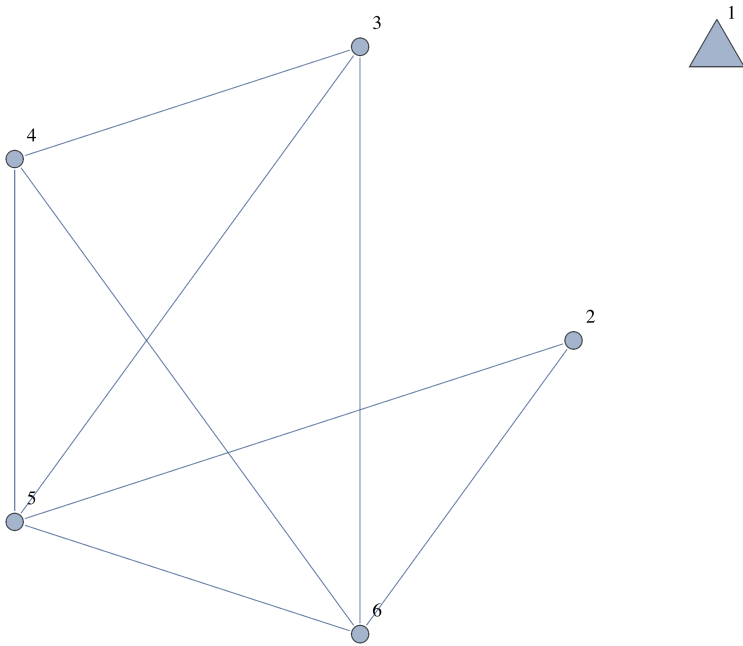
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(00++)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

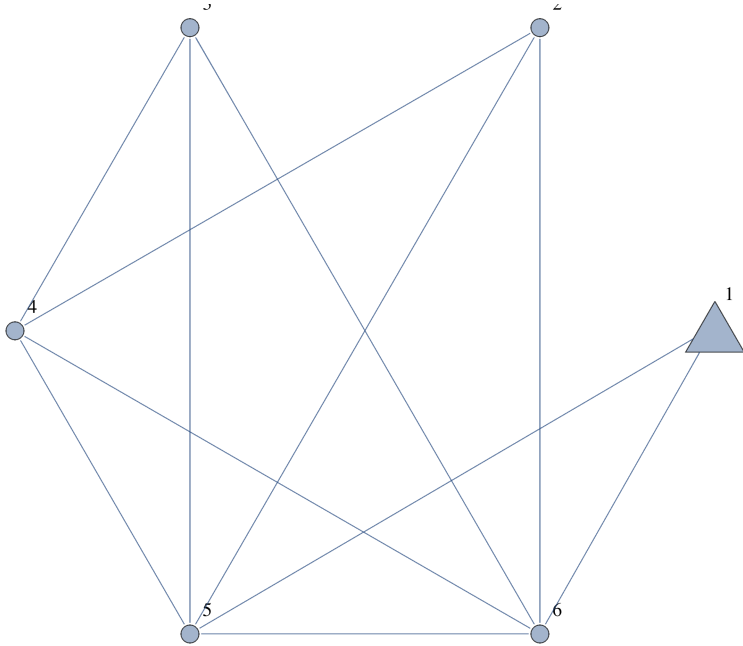


Player 2 lost!

■ **Player 2's Turn**

(0+)

```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 5, 1 ↔ 6, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 1's Turn**

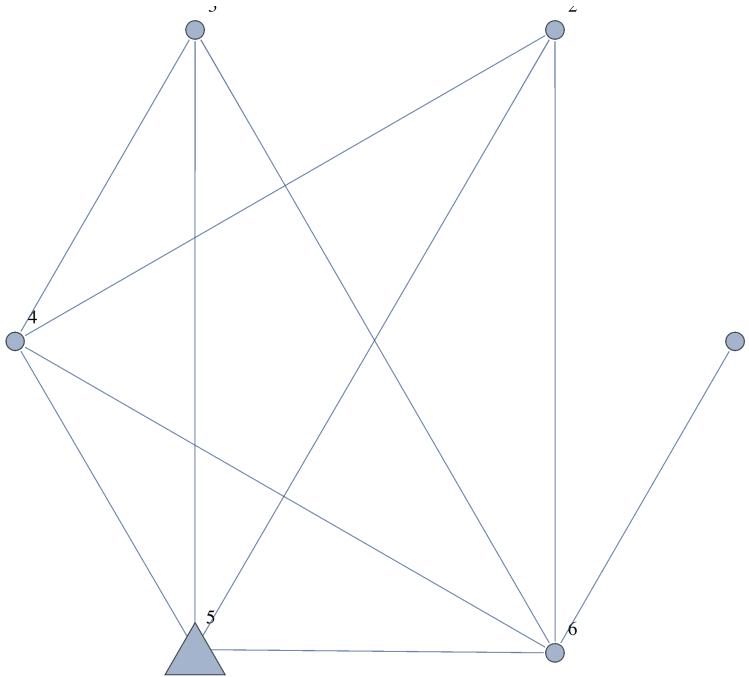
(0+0)



```

Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 6, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]

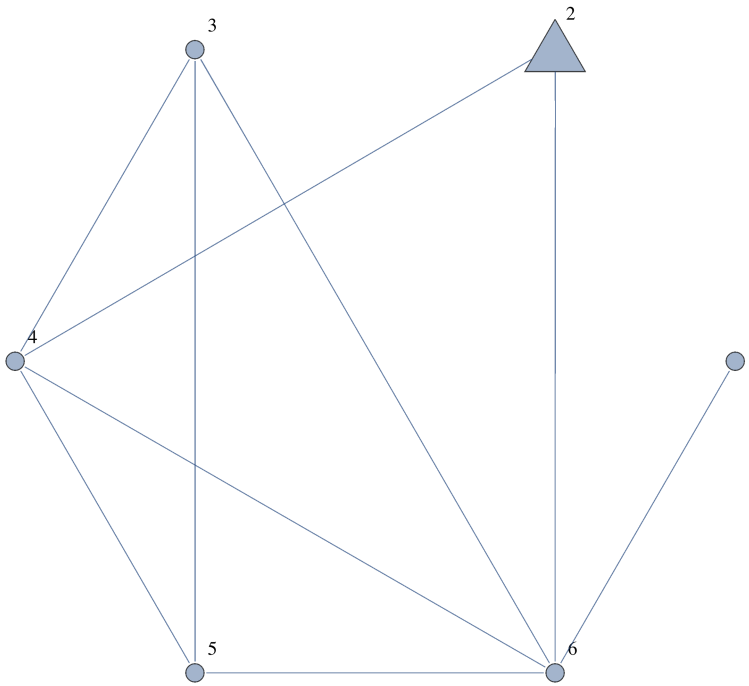
```



### ■ Player 2's Turn

(0+0)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 4, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

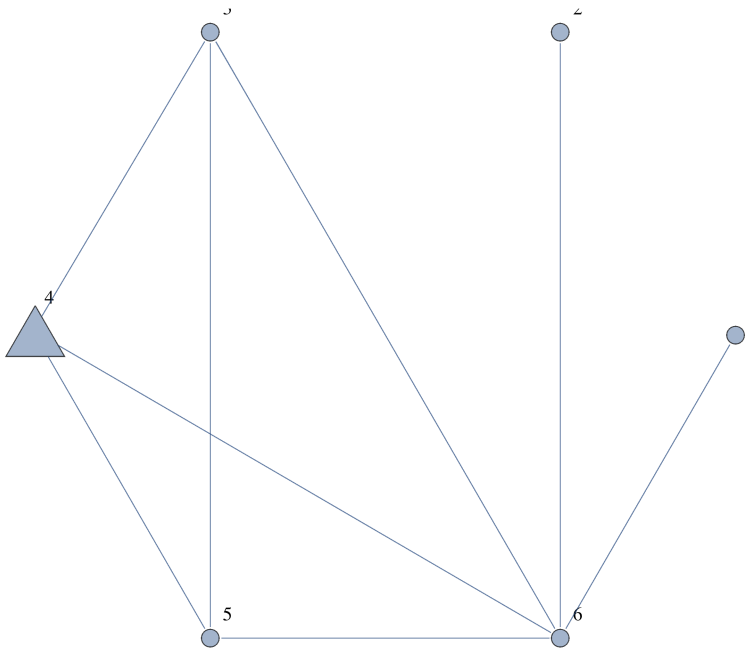


Player 2 has two nonisomorphic options, to  $v_4$  or  $v_6$ .

■ **Player 1's Turn**

(0+00\_4)

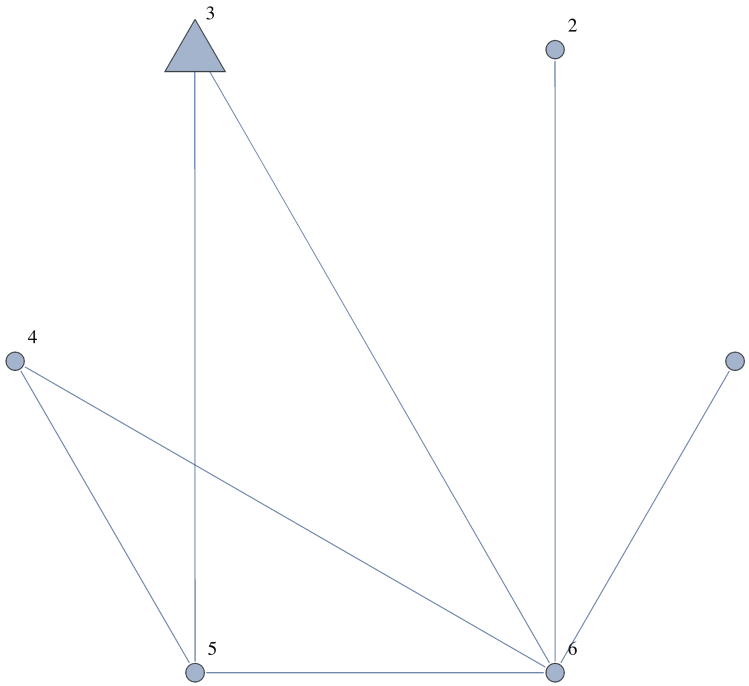
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},  
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0+00\_4)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

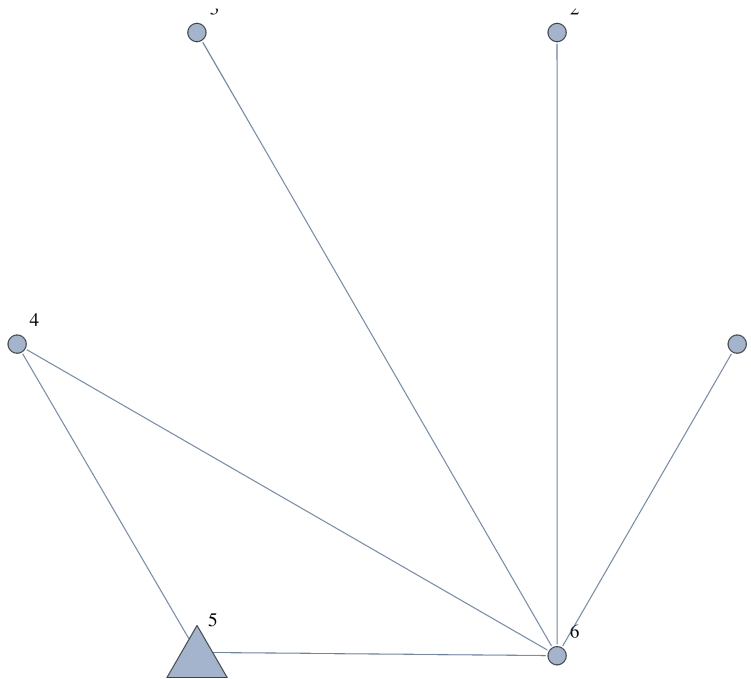


Player 2 has two nonisomorphic options, to  $v_5$  or  $v_6$ .

■ **Player 1's Turn**

(0+00\_40\_5)

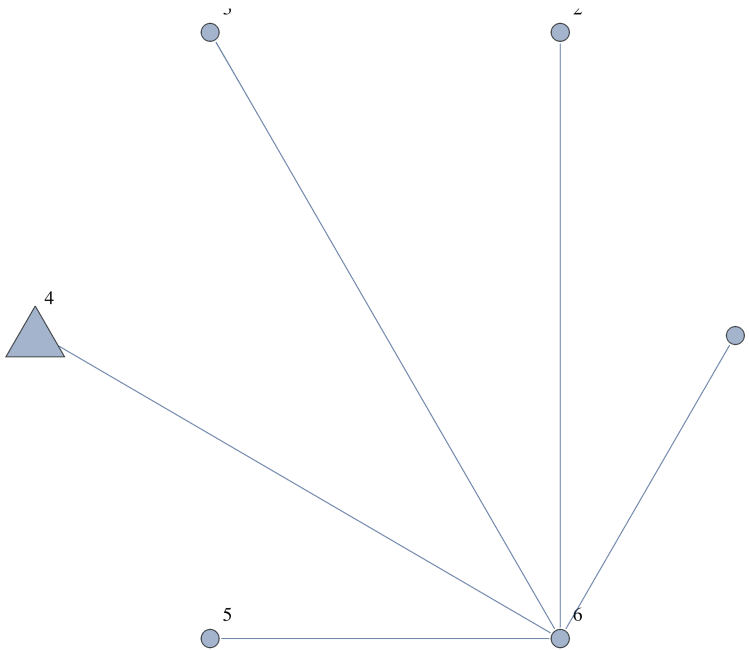
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0+00\_40\_5)

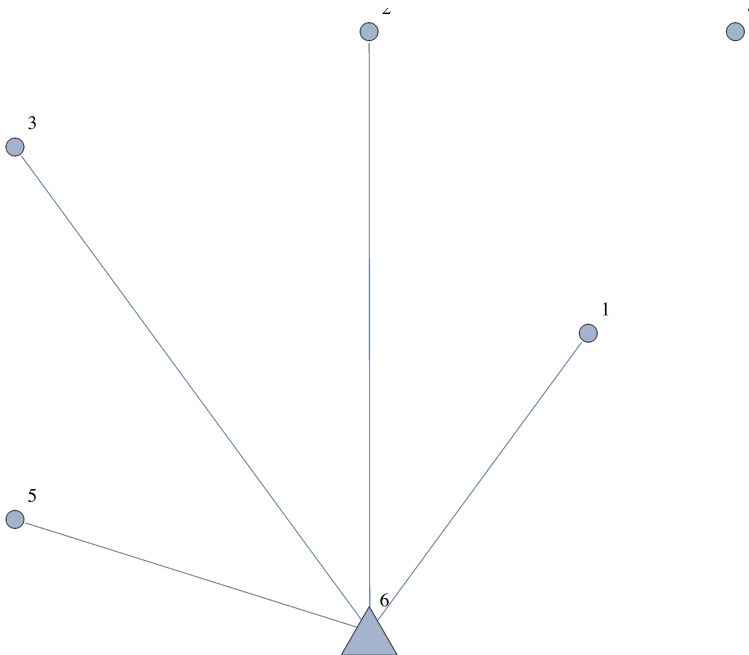
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 6, 2 -> 6, 3 -> 6, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(0+00\_40\_50)

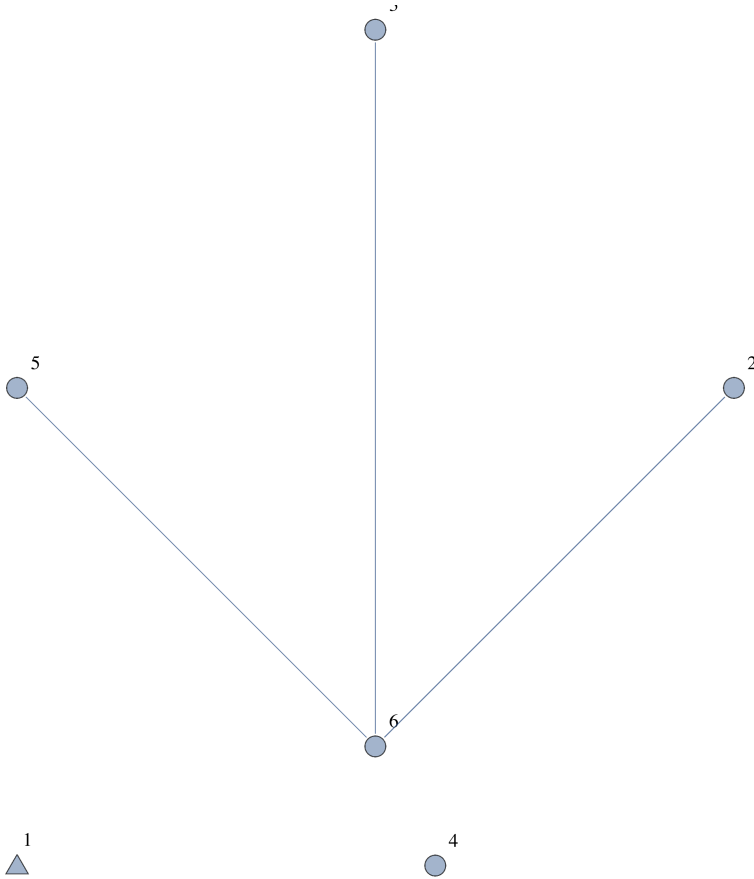
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 6, 2 -> 6, 3 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(0+00\_40\_50)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ← 6, 3 ← 6, 5 ← 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

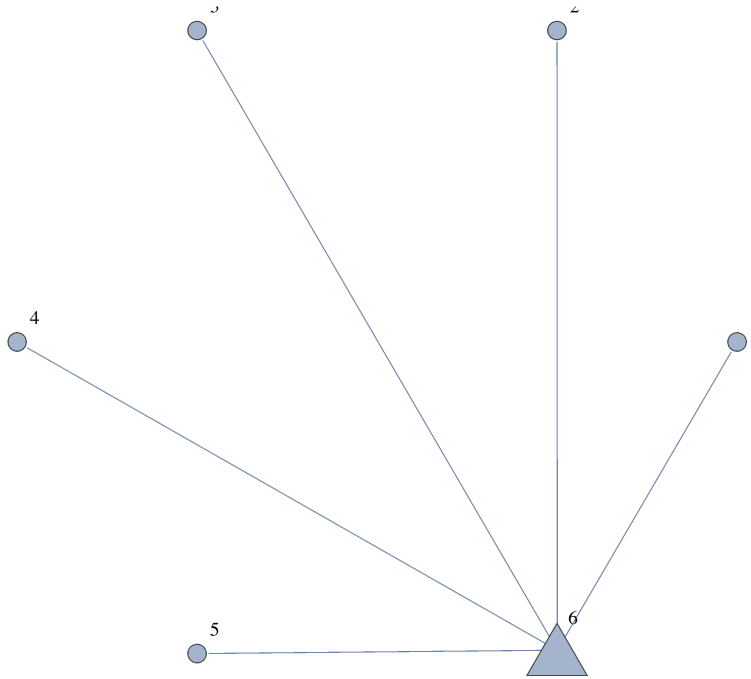


Player 2 lost!

### ■ Player 1's Turn

(0+00\_40\_5+)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

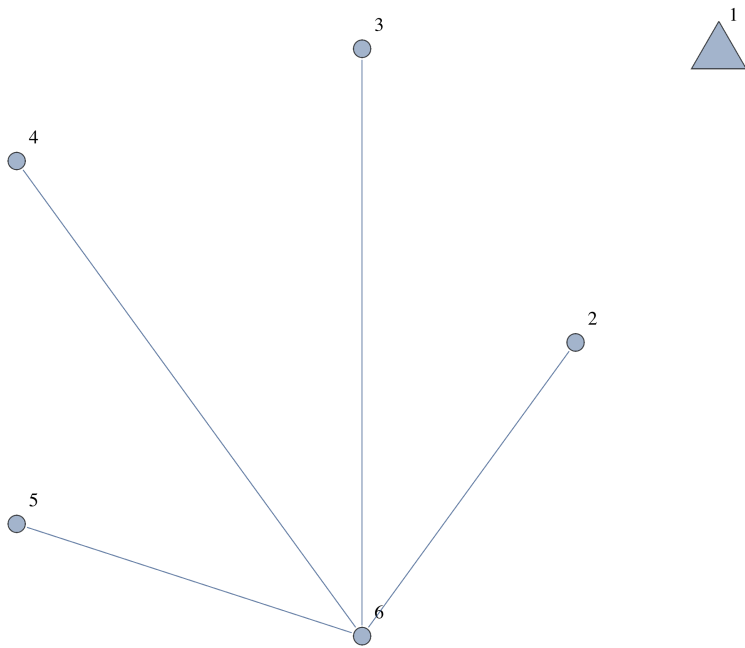


■ **Player 2's Turn**

(0+00\_40\_5+)



```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

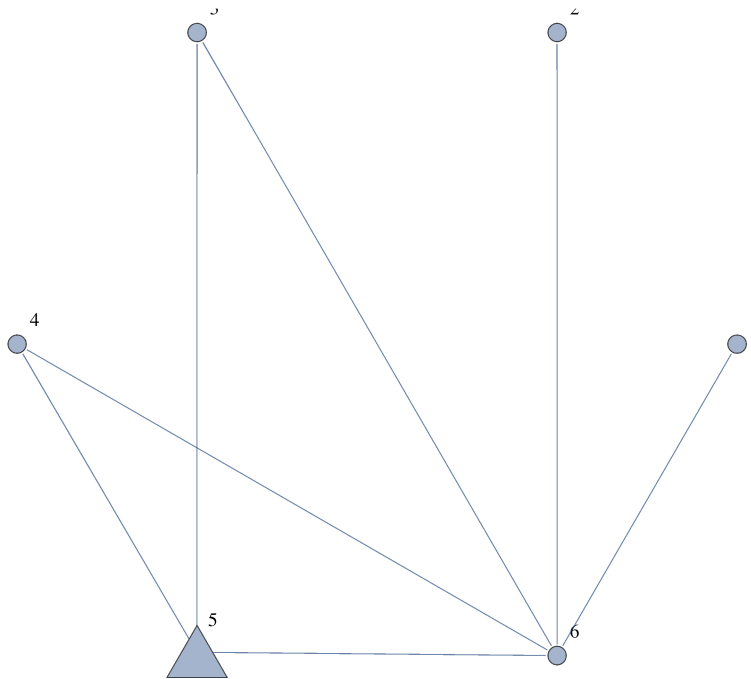


Player 2 lost!

■ **Player 1's Turn**

(0+00\_4+\_5)

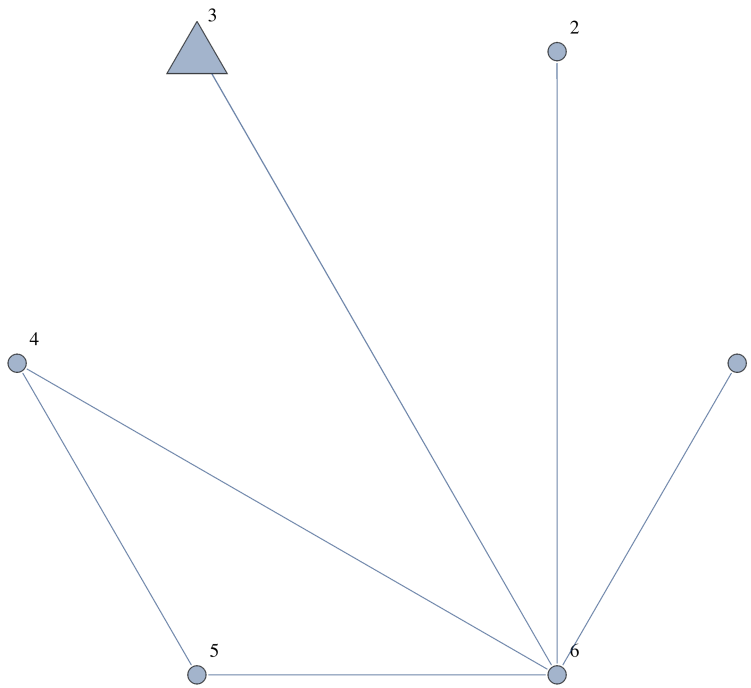
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0+00\_4+\_5)

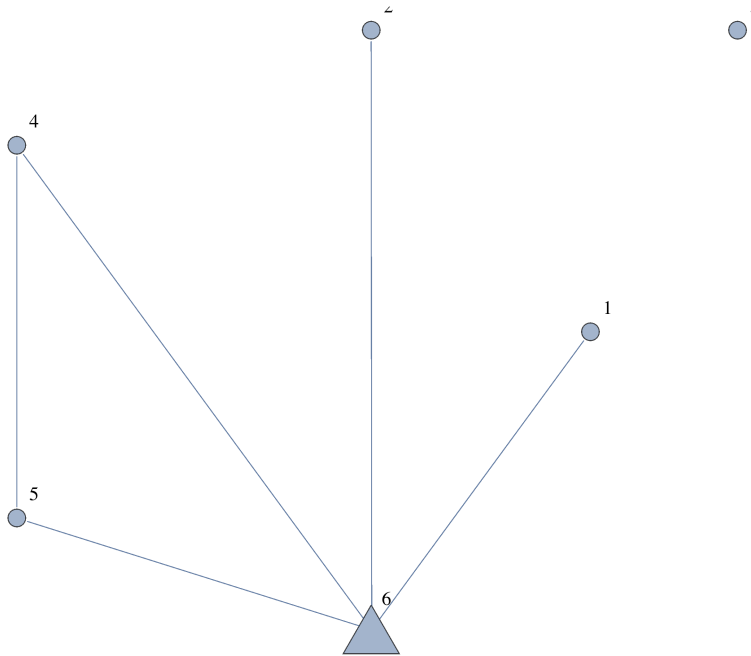
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(0+00\_4+\_50)

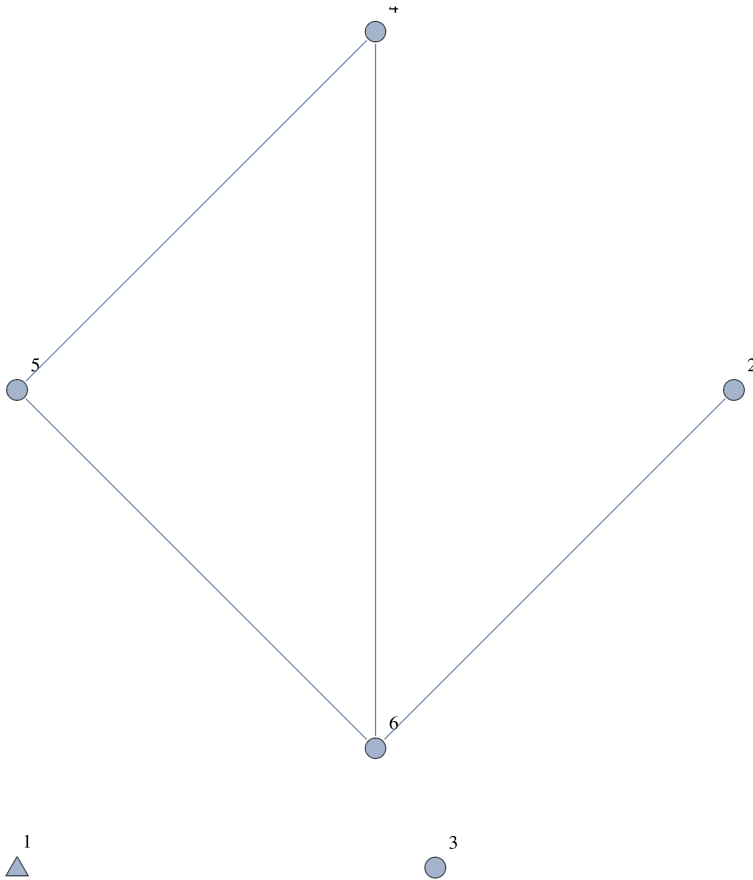
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(0+00\_4+\_50)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

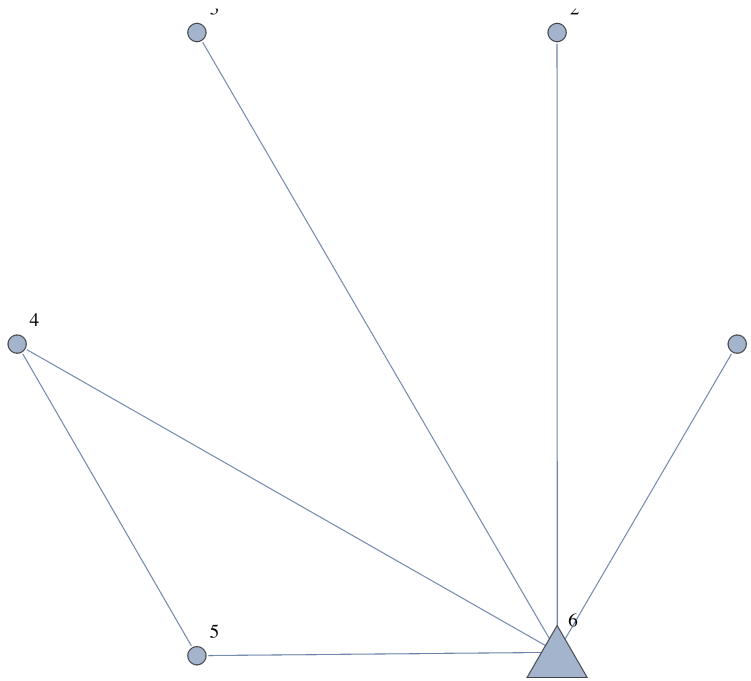


Player 2 lost!

■ **Player 1's Turn**

(0+00\_4+\_5+)

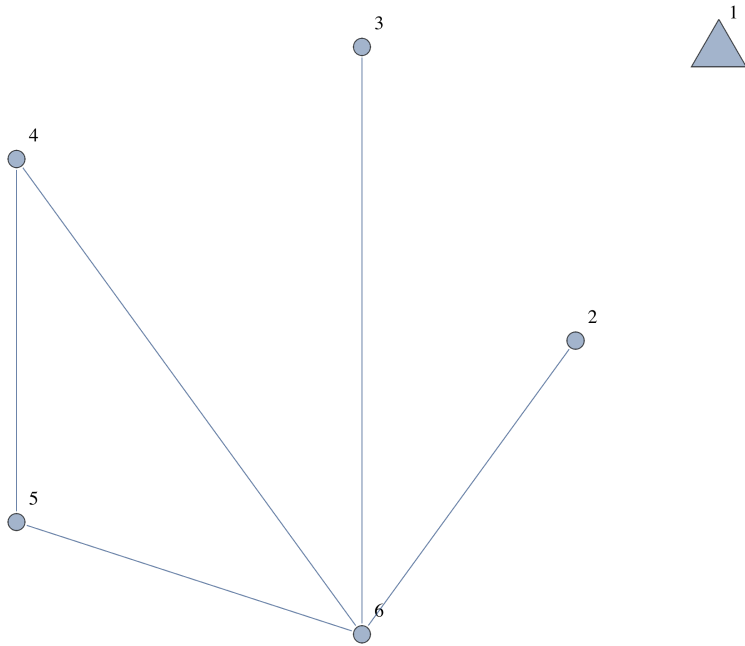
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(0+00\_4+\_5+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

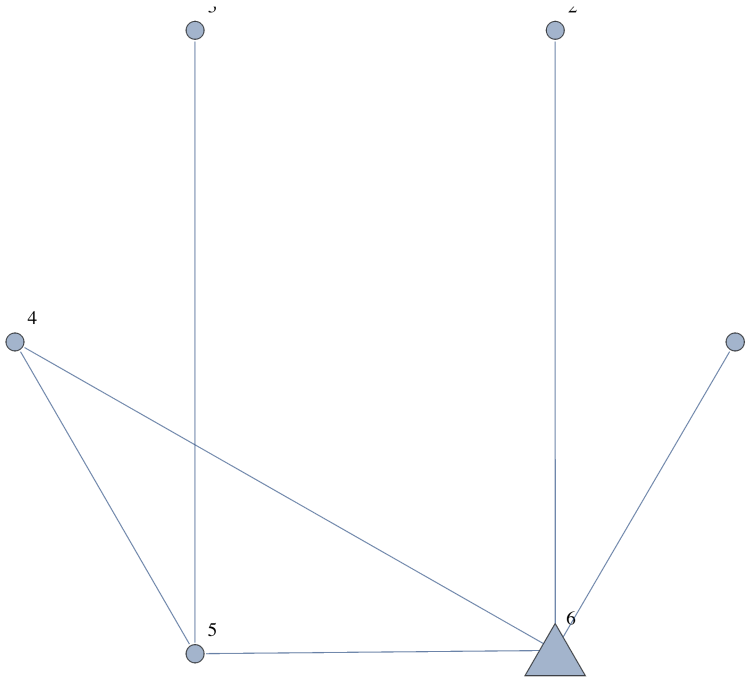


Player 2 lost!

■ Player 1's Turn

(0+00\_40\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

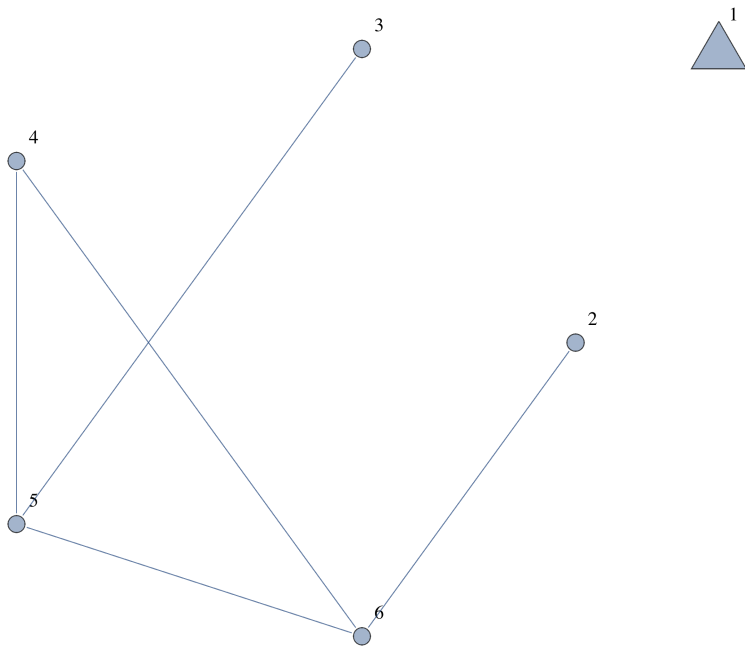


■ **Player 2's Turn**

(0+00\_40\_6)



```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

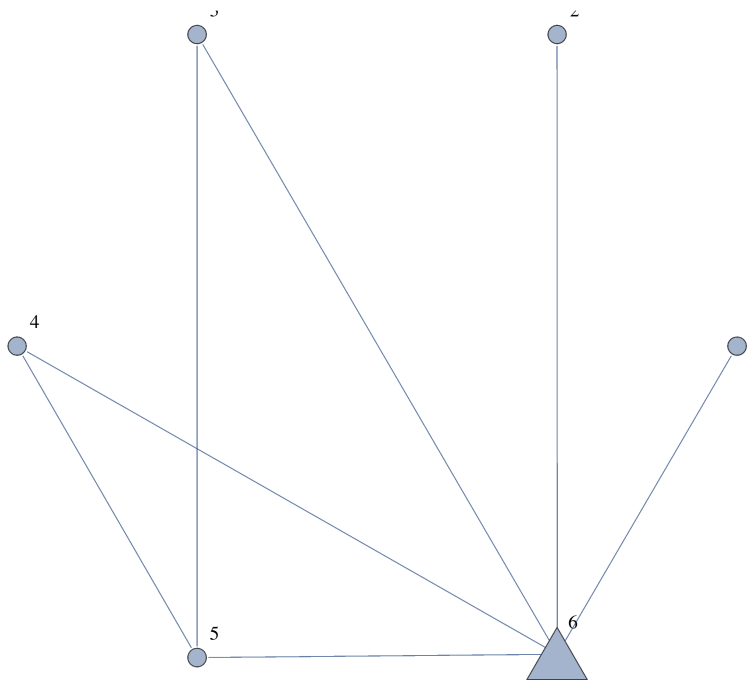


Player 2 lost!

■ Player 1's Turn

(0+00\_4+\_6)

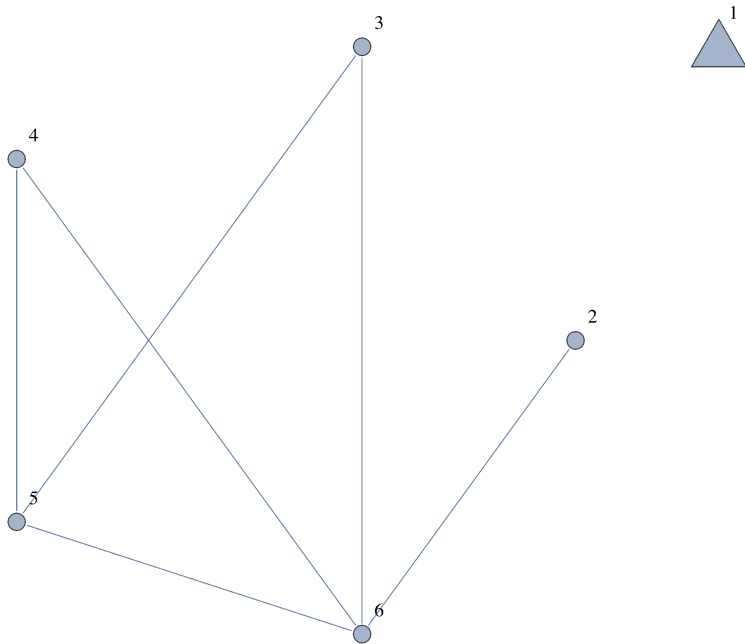
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0+00\_4+\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

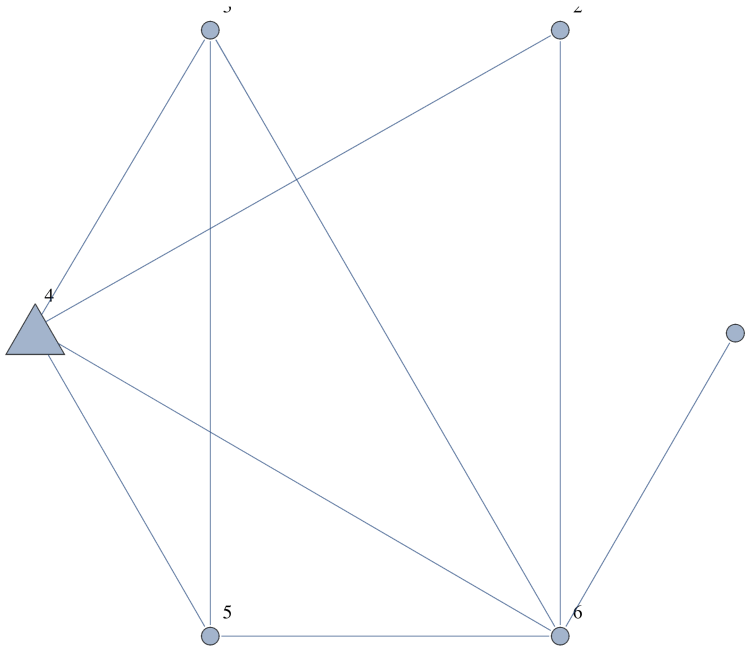


Player 2 lost!

■ **Player 1's Turn**

(0+0+\_4)

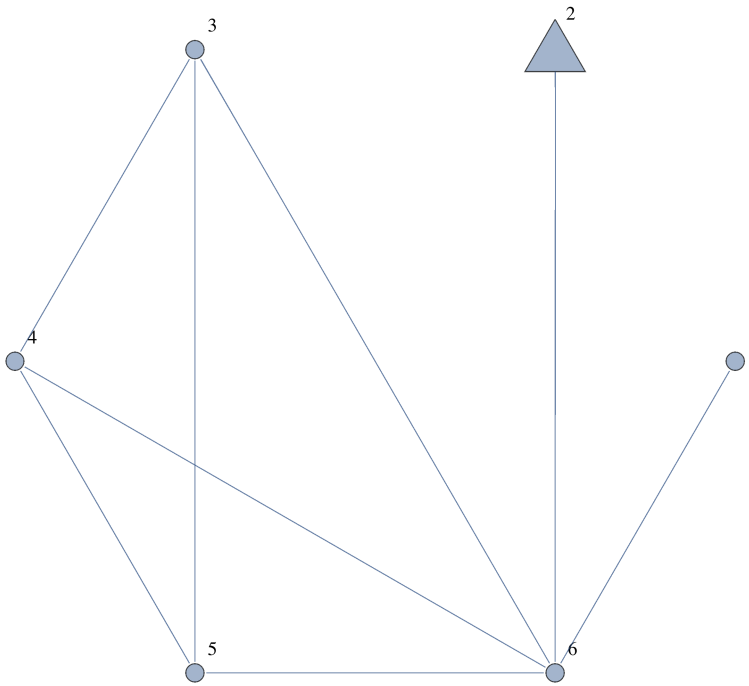
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 4, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},  
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(0+0+\_4)

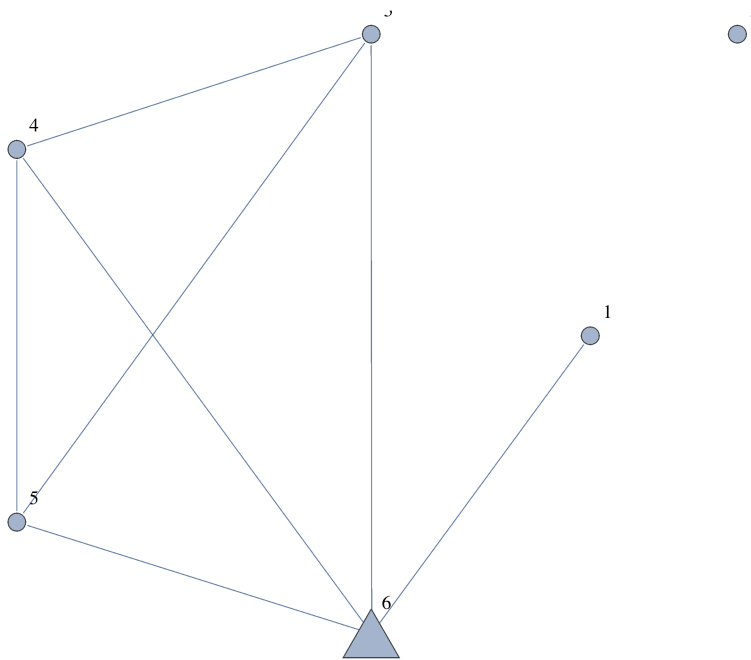
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 1's Turn

(0+0+\_40)

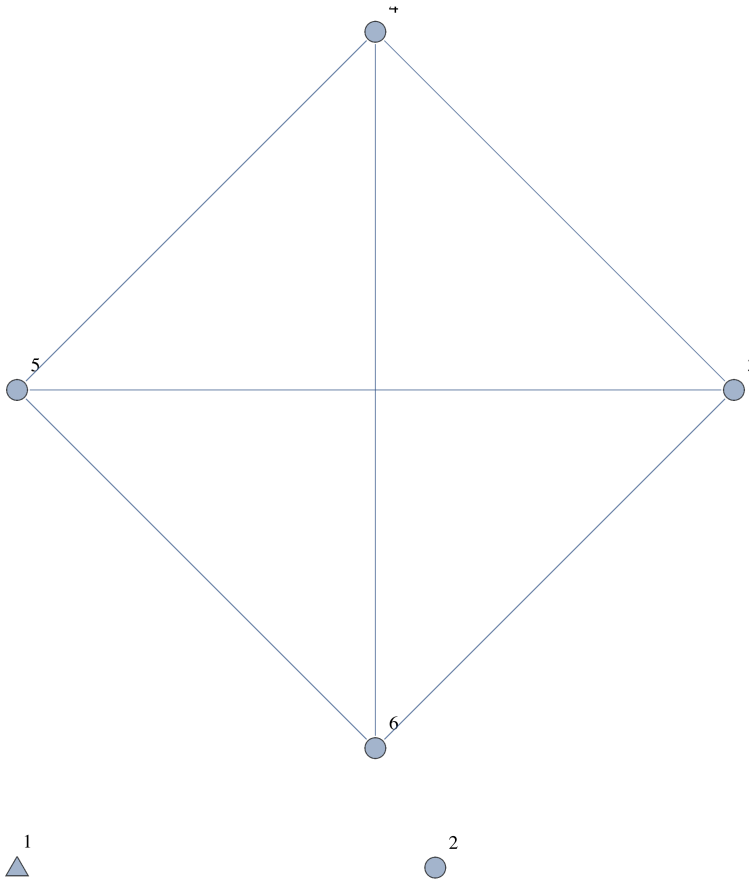
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(0+0+\_40)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

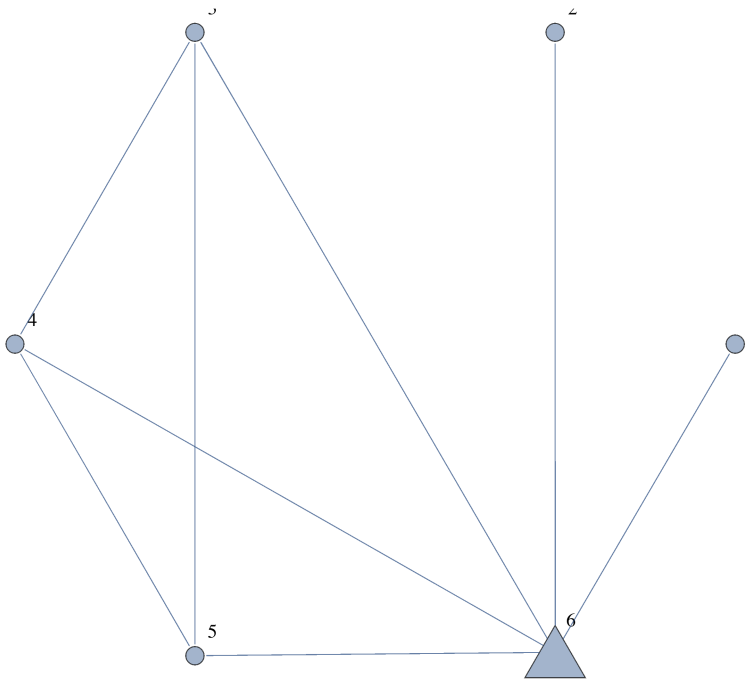


Player 2 lost!

■ **Player 1's Turn**

(0+0+\_4+)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

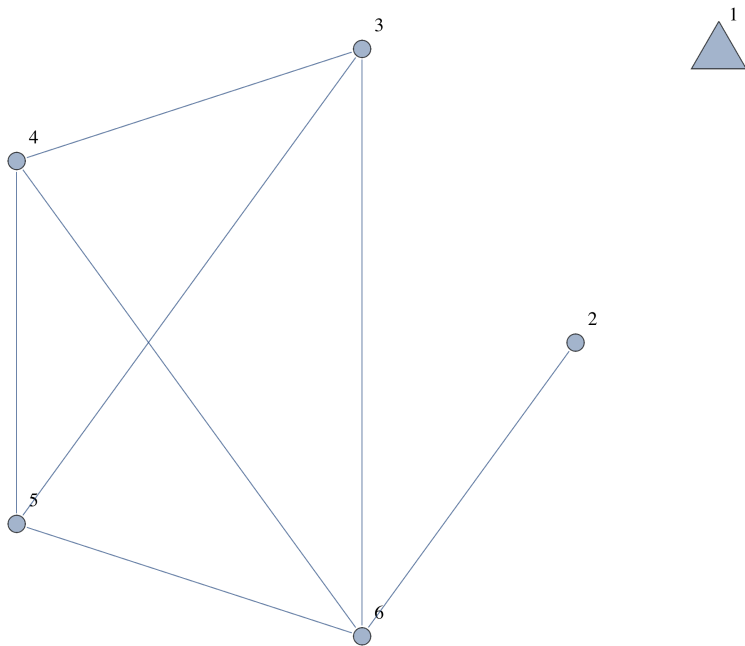


■ Player 2's Turn

(0+0+\_4+)



```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

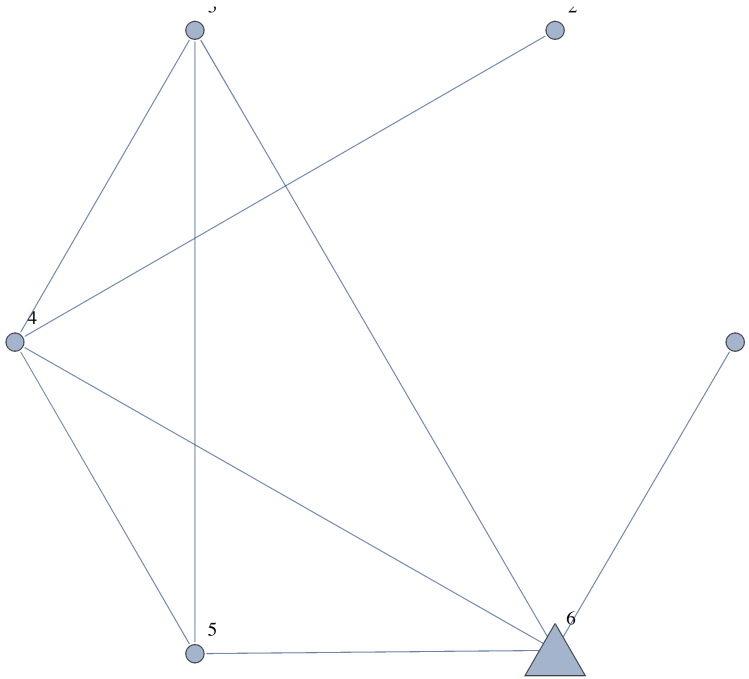


Player 2 lost!

■ **Player 1's Turn**

(0+00\_6)

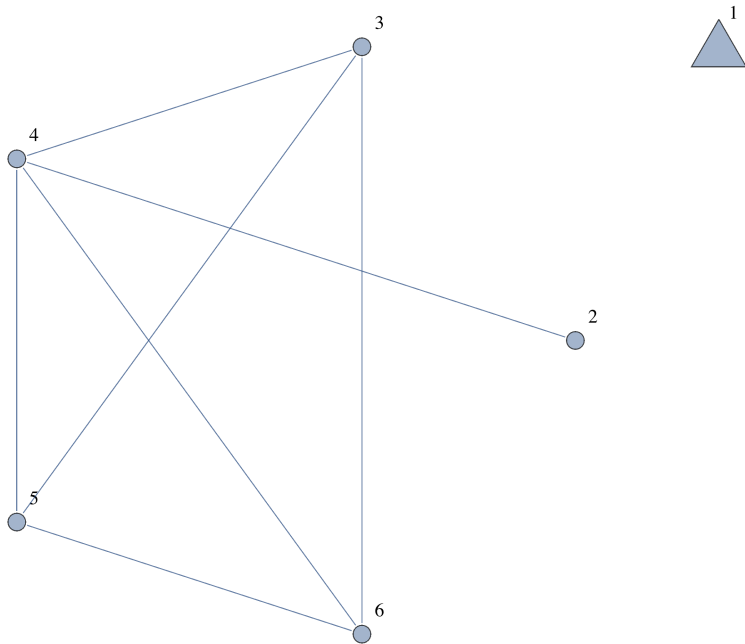
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 4, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(0+00\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 4, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

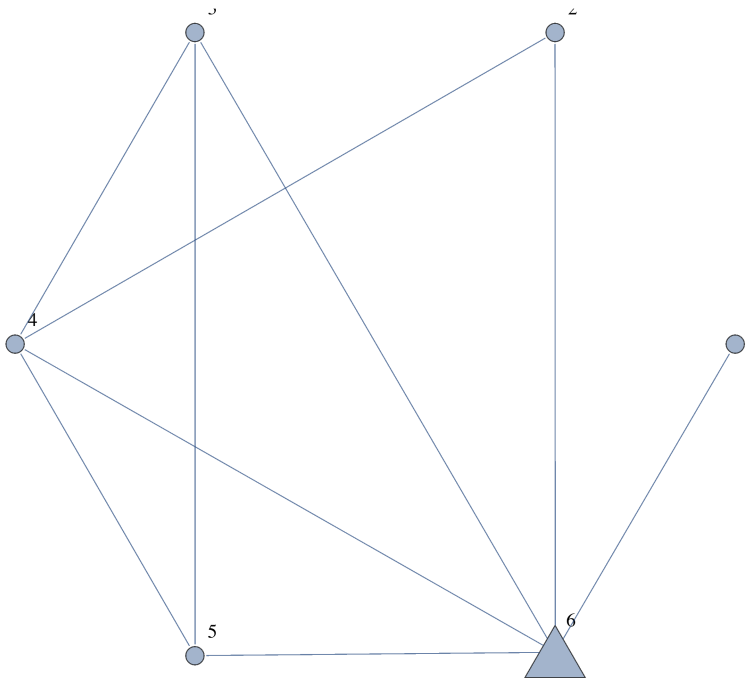


Player 2 lost!

■ **Player 1's Turn**

(0+0+\_6)

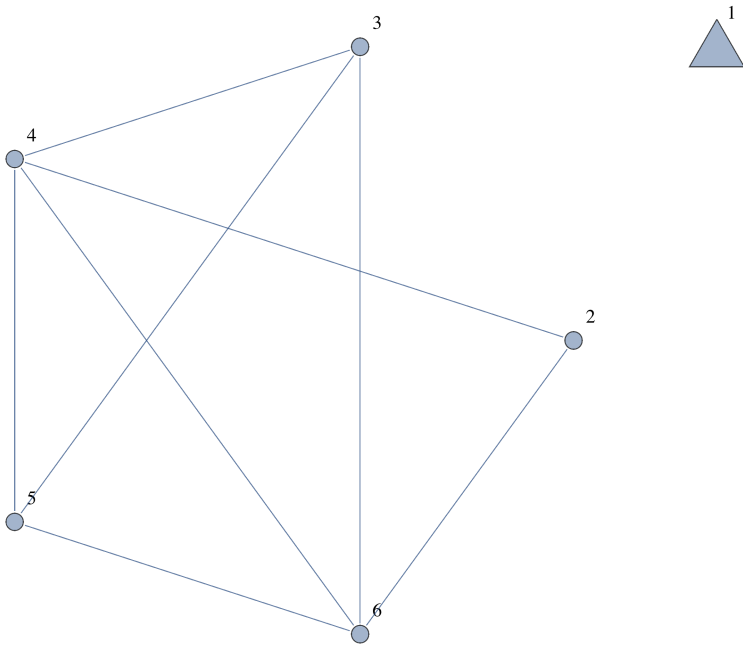
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 4, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0+0+\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 4, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

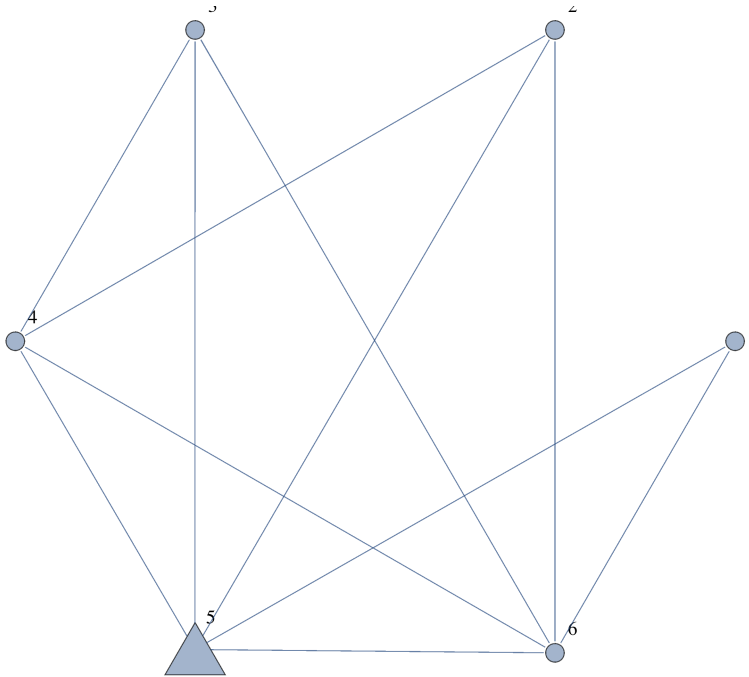


Player 2 lost!

■ Player 1's Turn

(0++)

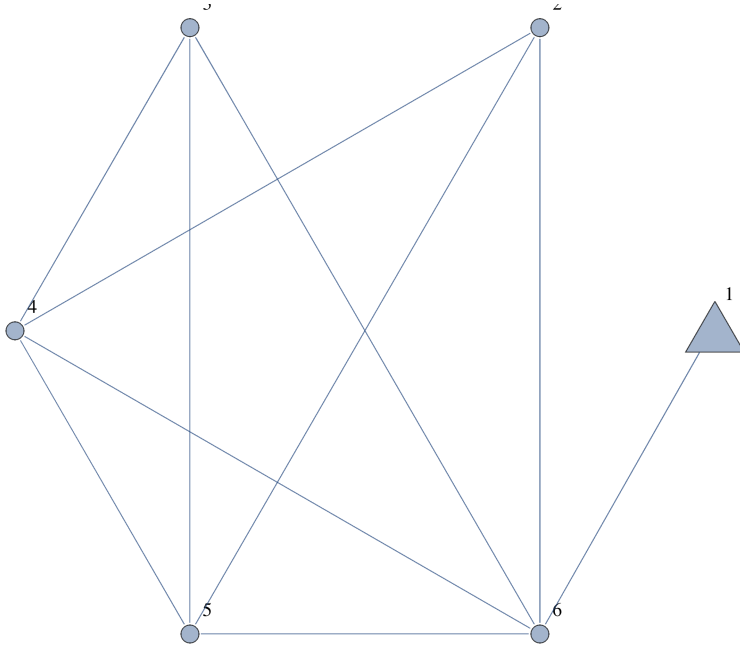
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 5, 1 ↔ 6, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(0++)

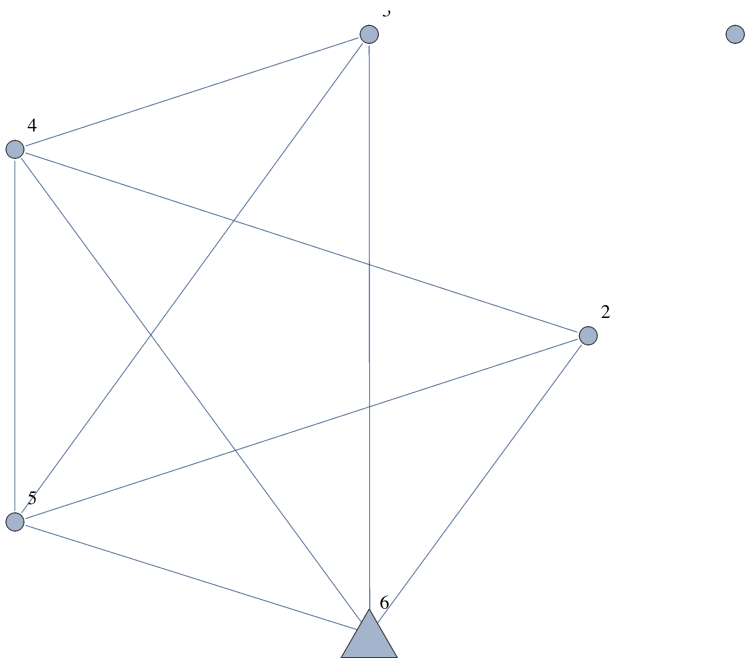
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 6, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(0++0)

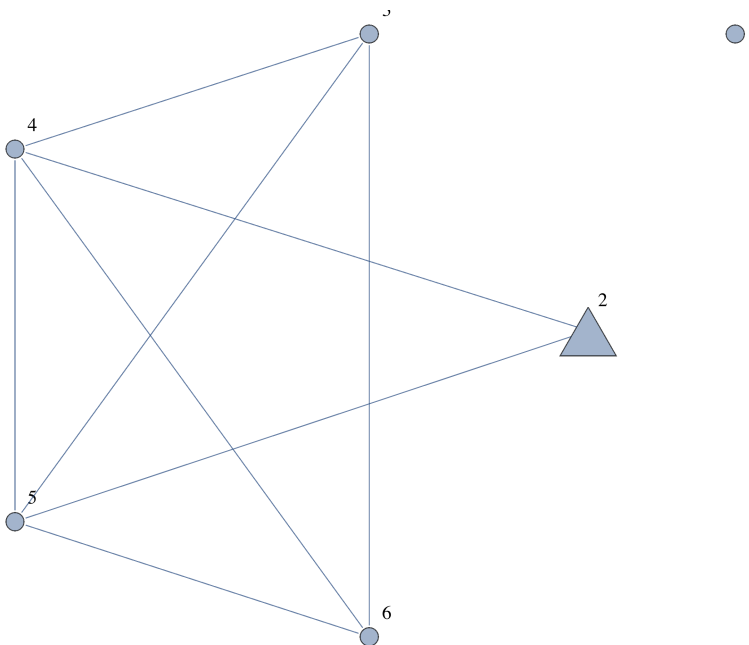
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(0++0)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 4, 2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

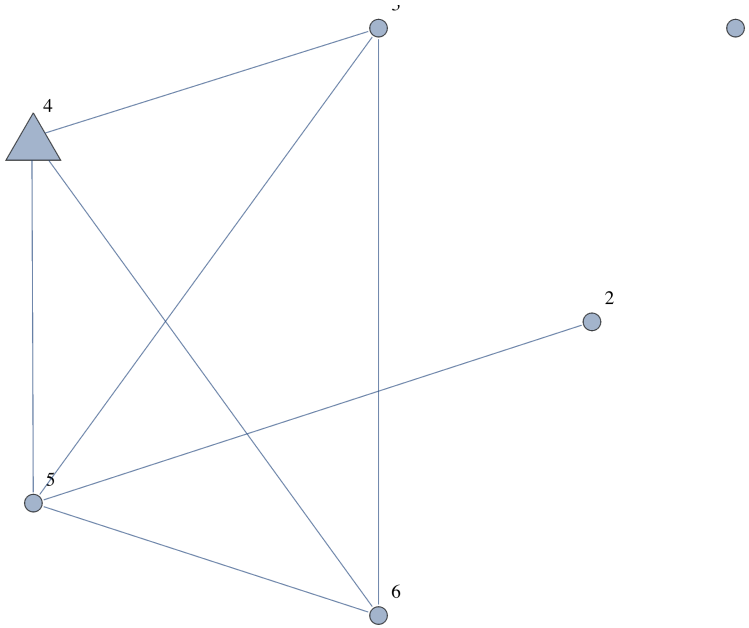




### ■ Player 1's Turn

(0++00)

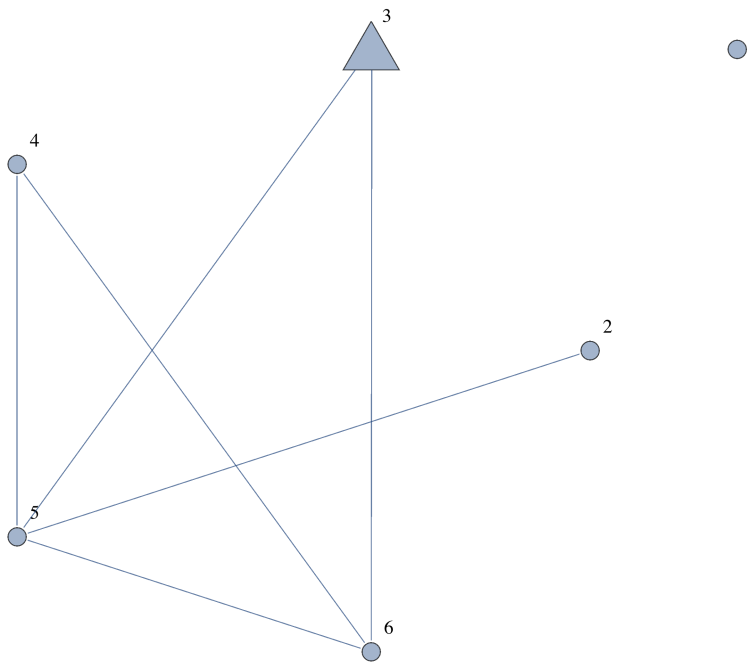
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
  VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(0++00)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

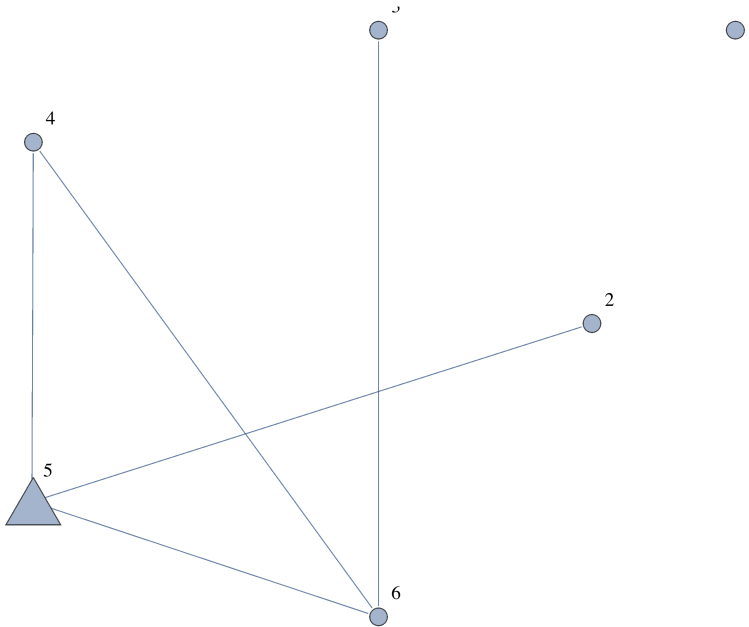


Player 2 has two nonisomorphic options, to  $v_5$  or  $v_6$ .

■ **Player 1's Turn**

(0++000\_5)

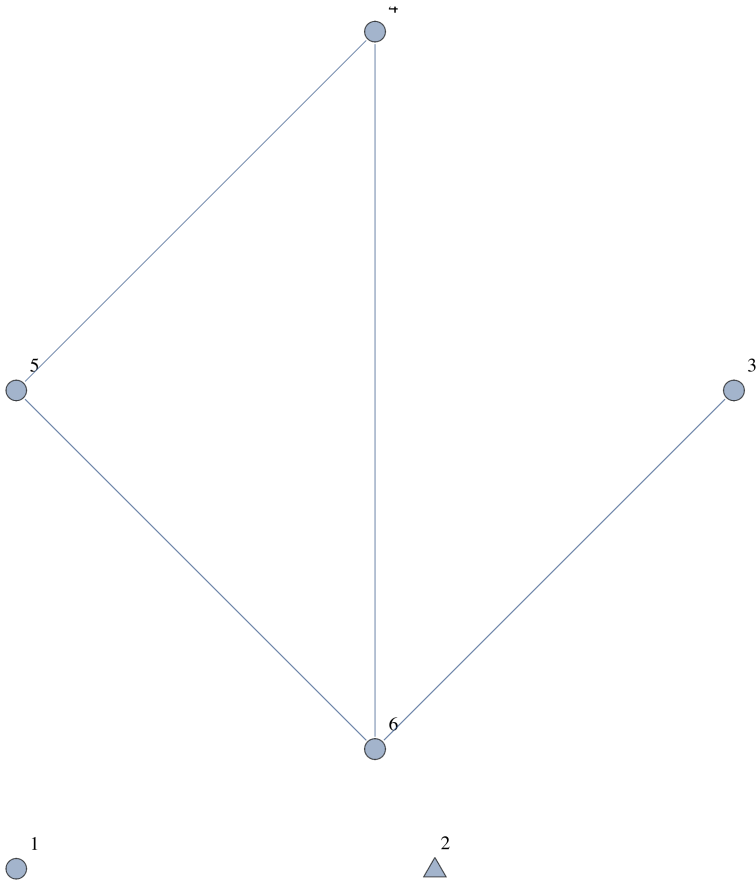
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0++000\_5)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

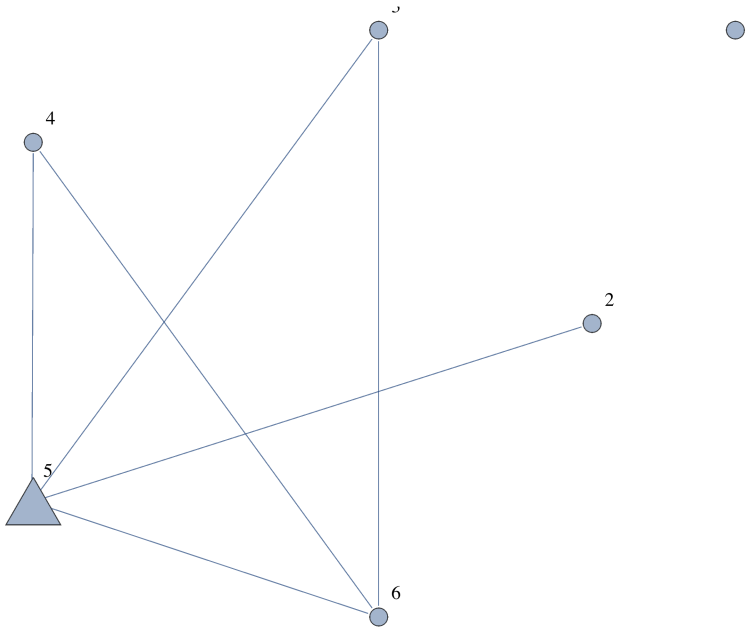


Player 2 lost!

■ Player 1's Turn

(0++00+\_5)

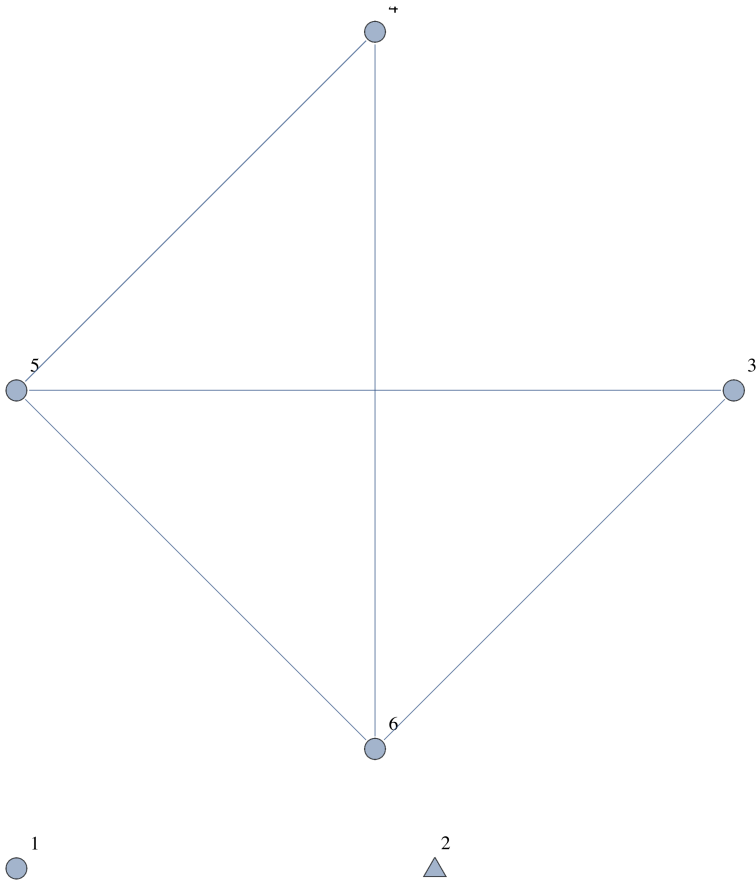
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0++00+\_5)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

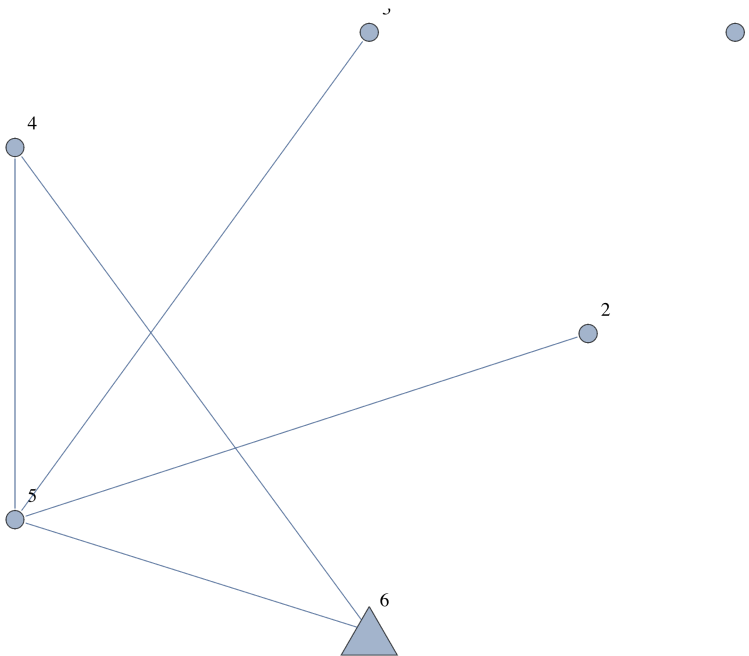


Player 2 lost!

■ **Player 1's Turn**

(0++000\_6)

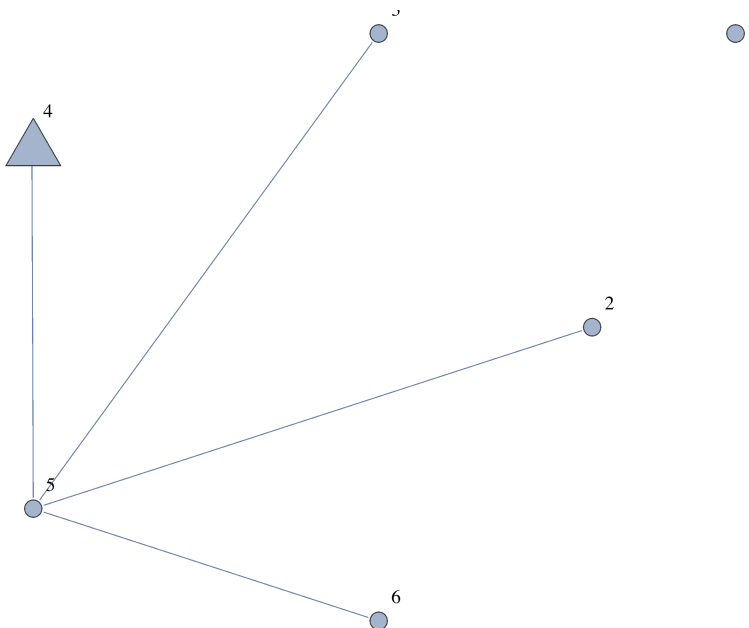
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0++000\_6)

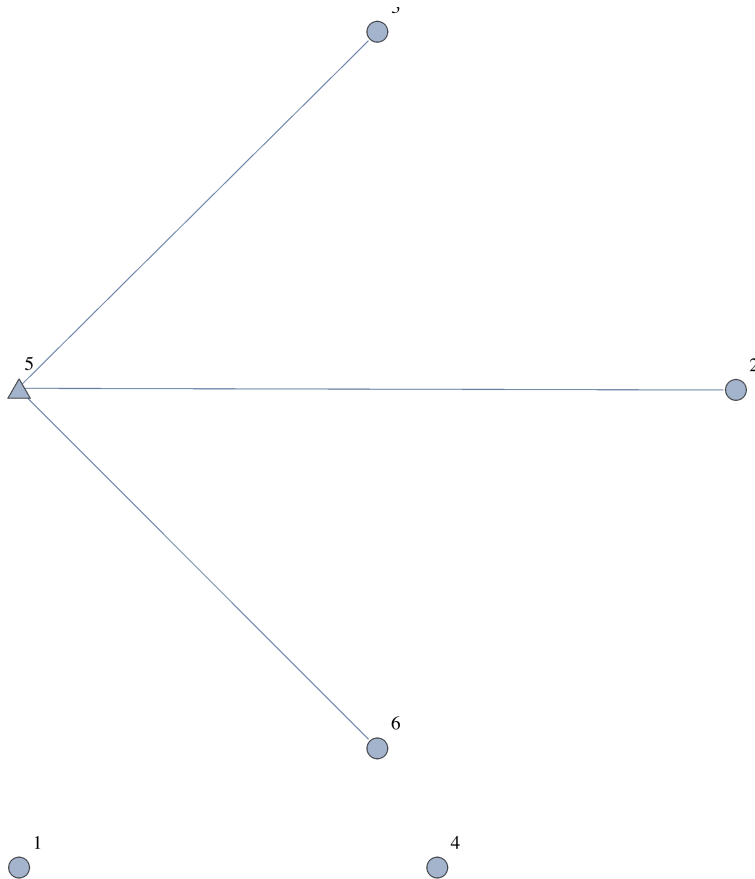
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 4 ↔ 5, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 1's Turn

(0++000\_60)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

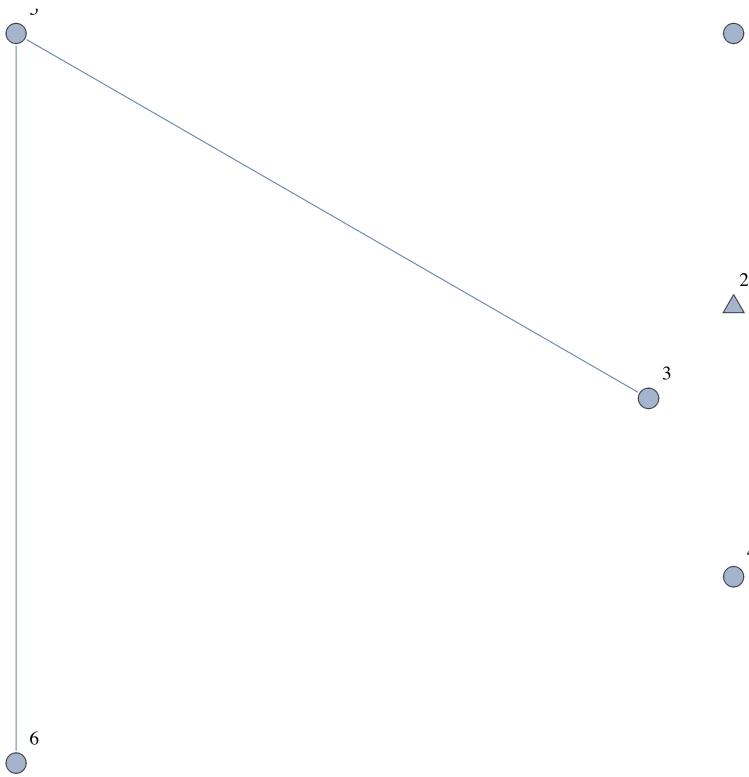


### ■ Player 2's Turn

(0++000\_60)



```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

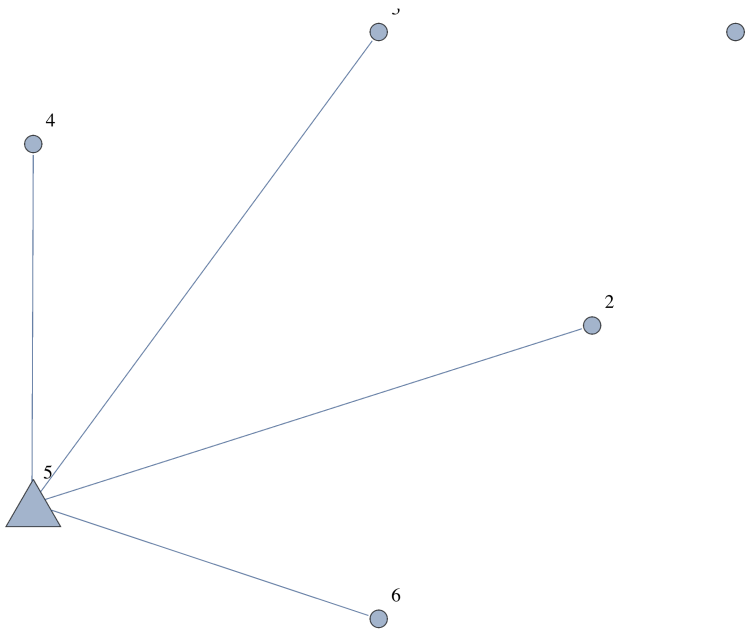


Player 2 lost!

■ **Player 1's Turn**

(0++000\_6+)

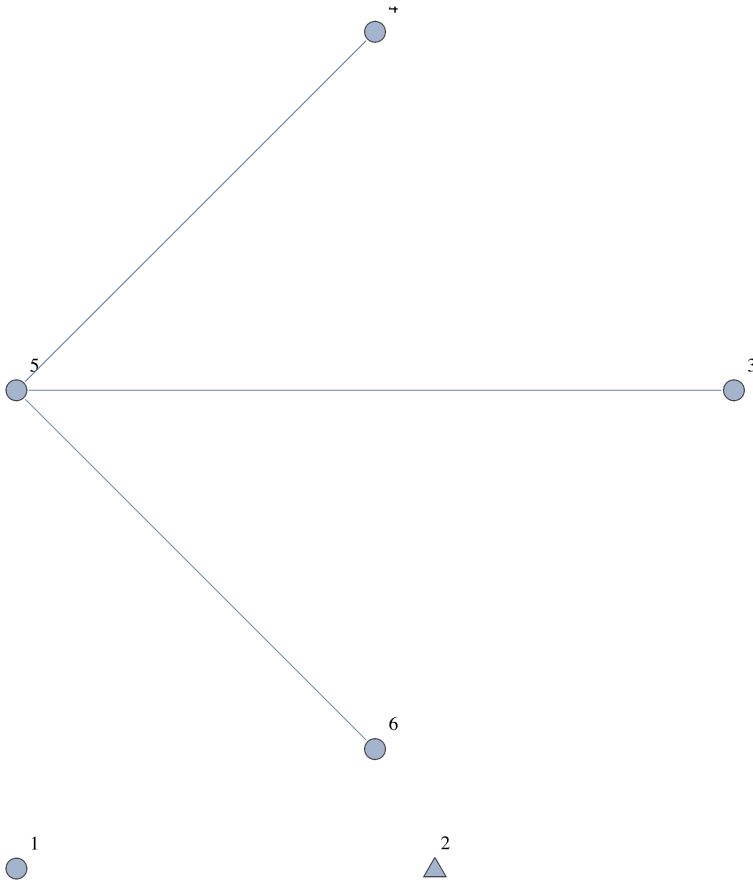
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 4 ↔ 5, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(0++000\_6+)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 4 ↔ 5, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

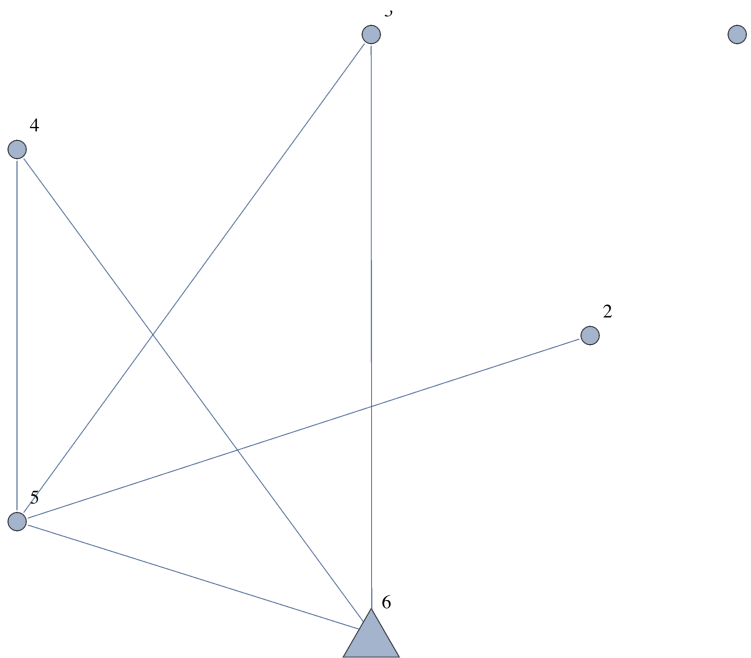


Player 2 lost!

■ **Player 1's Turn**

(0++00+\_6)

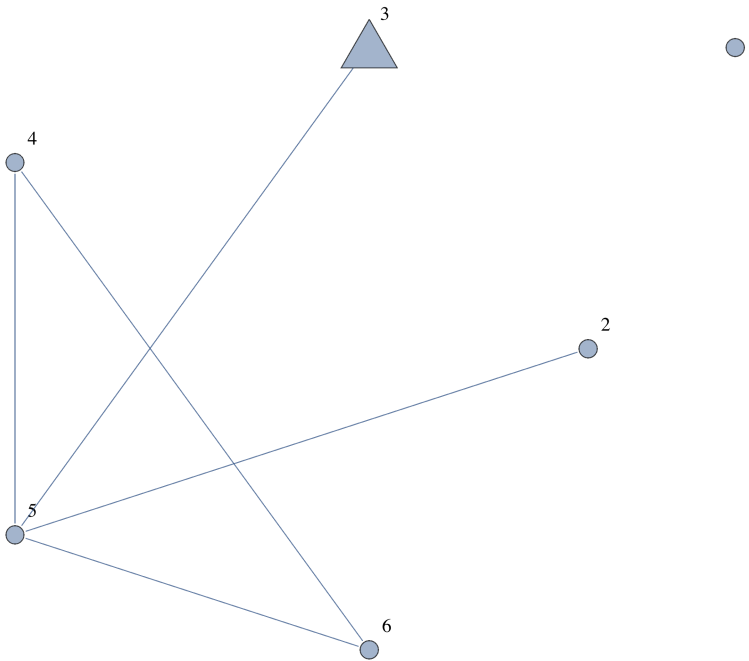
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0++00+\_6)

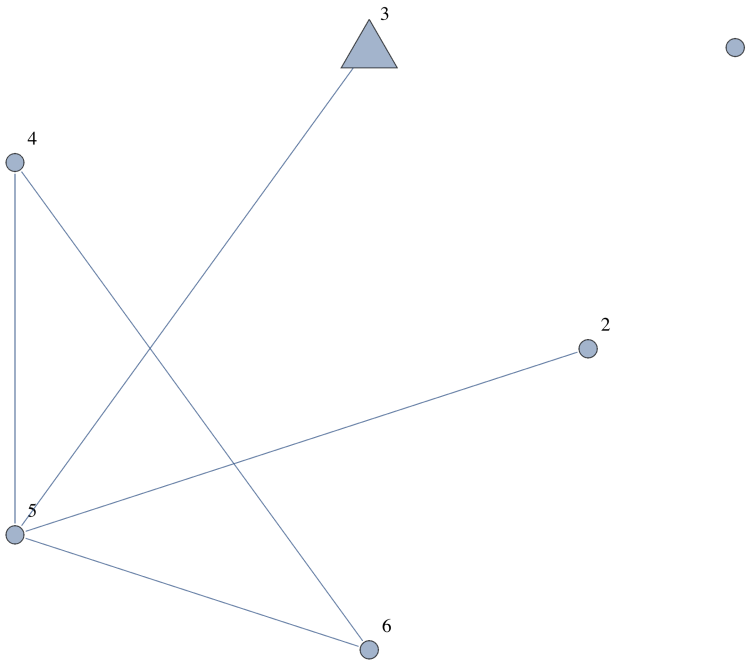
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0++00+\_6)

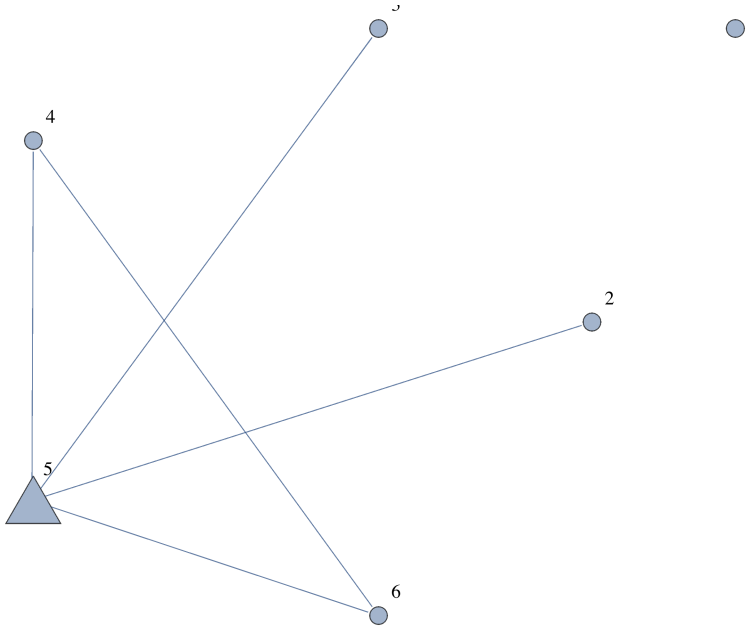
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(0++00+\_6+)

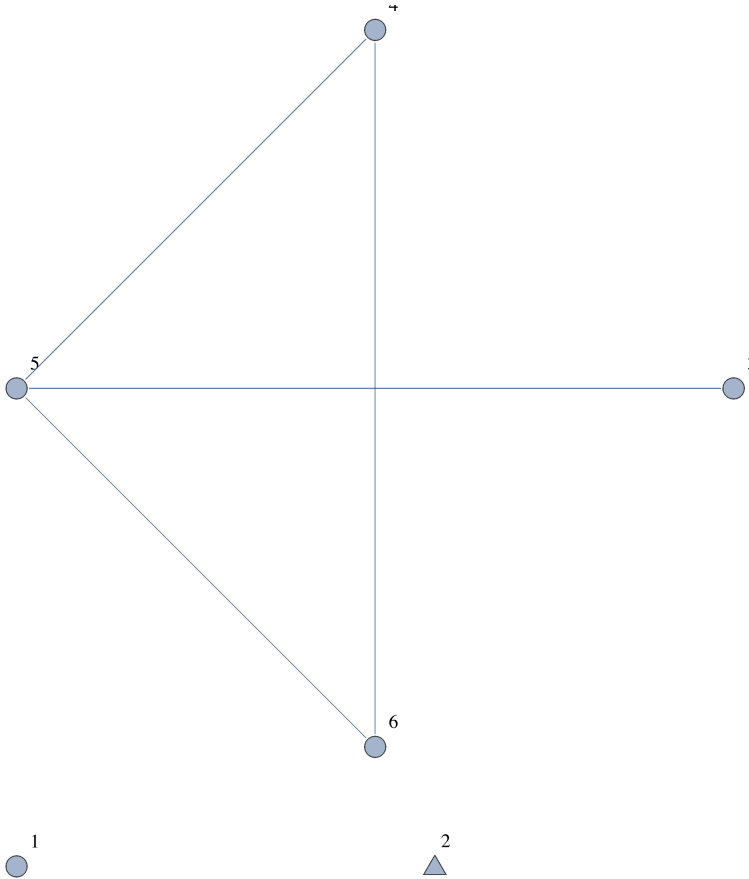
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(0++00+\_6+)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

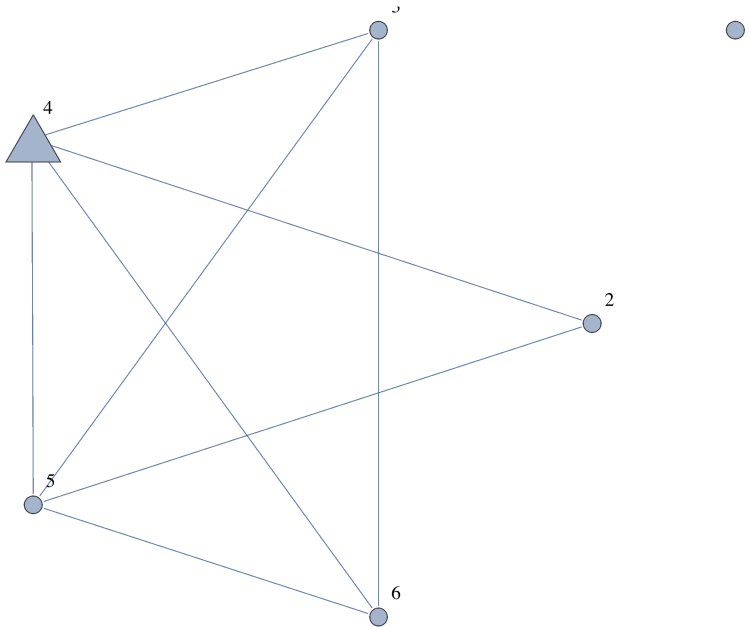


Player 2 lost!

### ■ Player 1's Turn

(0++0+)

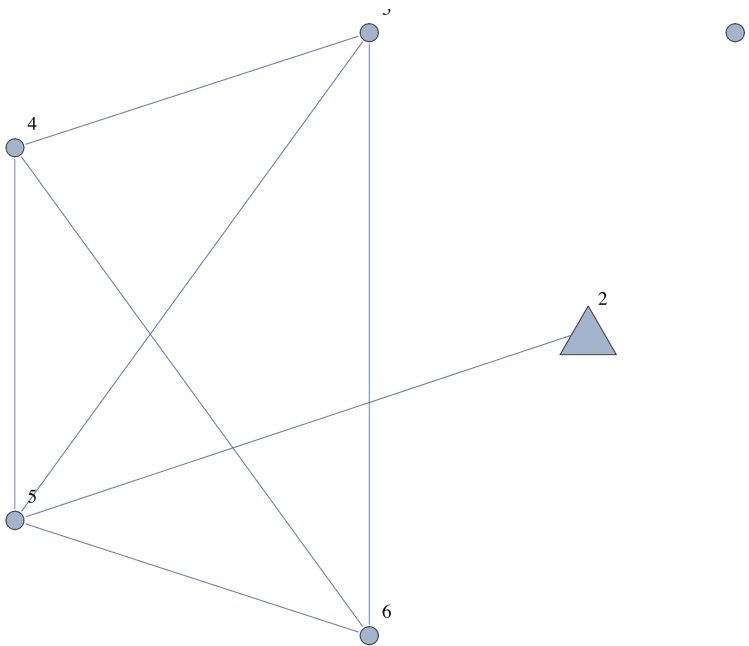
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 4, 2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(0++0+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

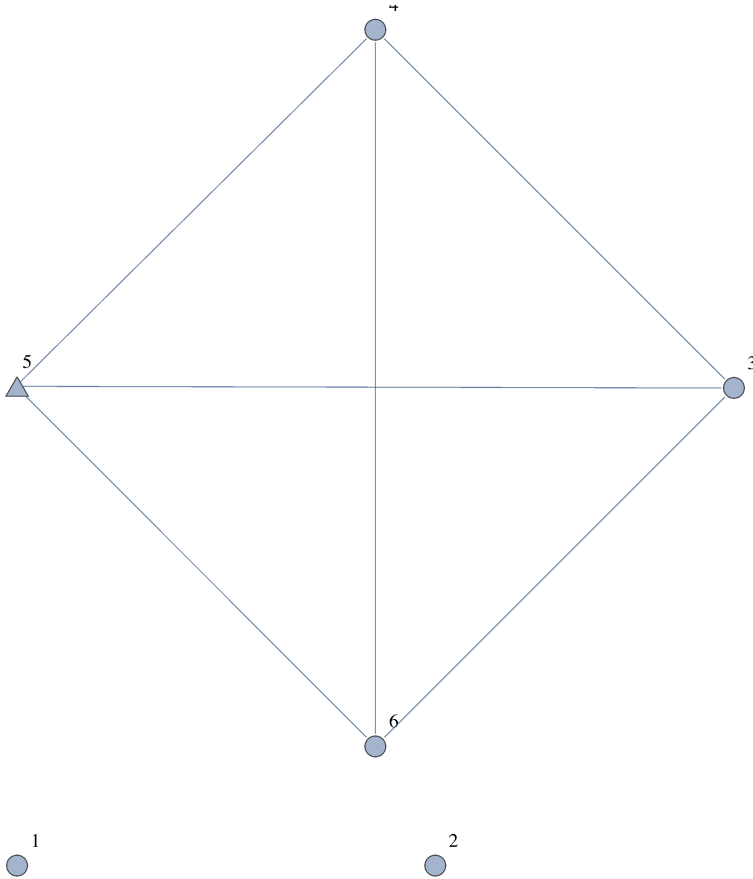




### ■ Player 1's Turn

(0++0+0)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

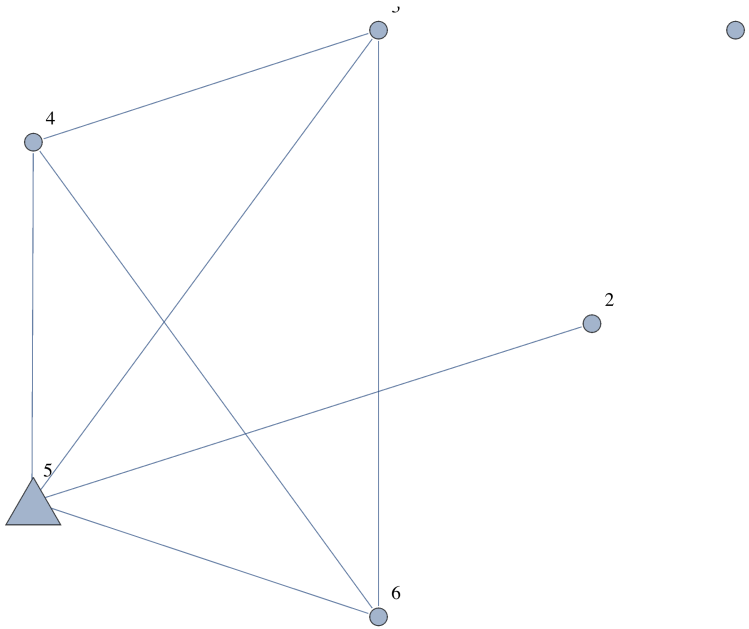


What remains is a  $K_4$ . Since the first player to play a  $K_4$  wins, Player 1 will win this game. Hence, Player 2 lost!

### ■ Player 1's Turn

(0++0++)

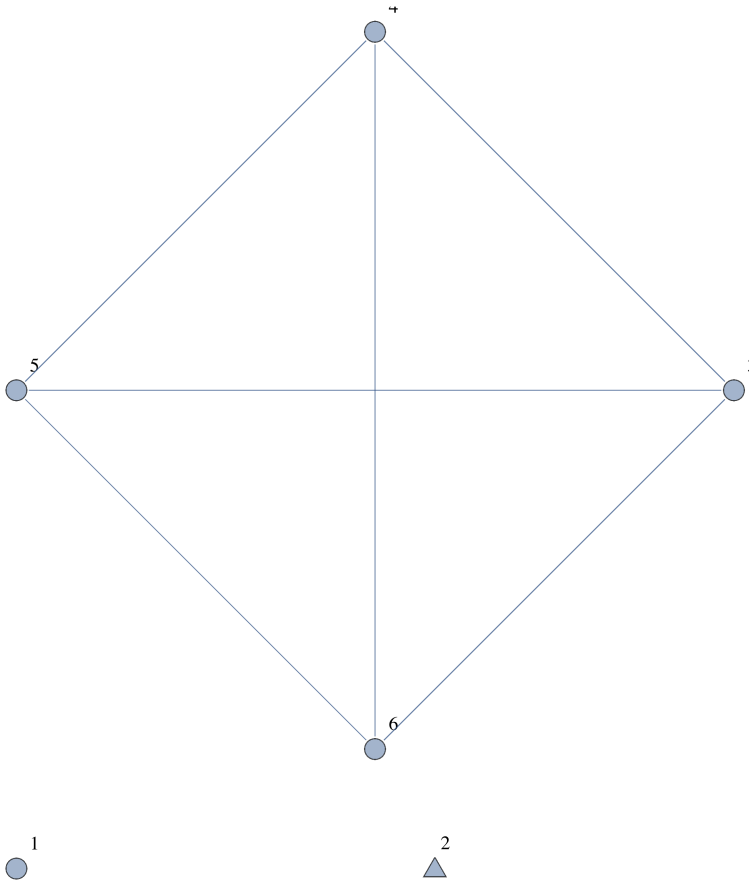
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(0++0++)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

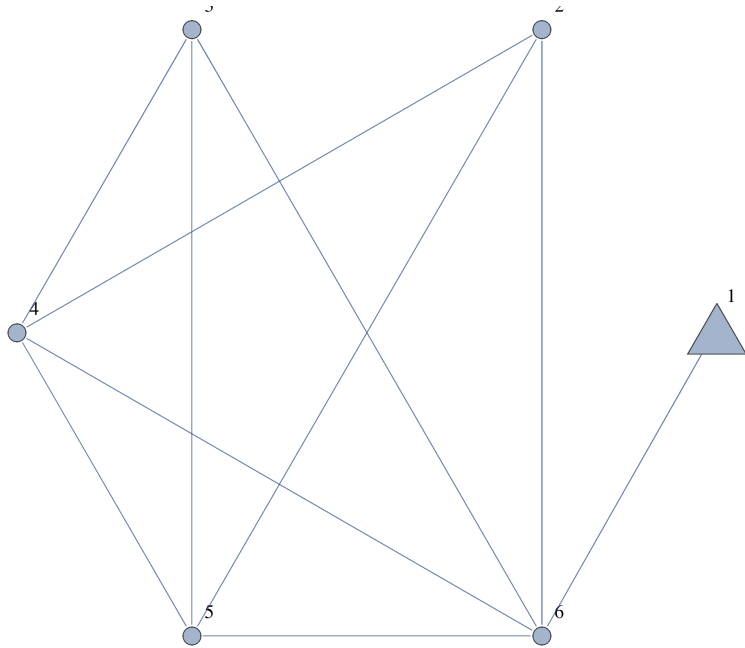


Player 2 lost!

■ **Player 1's Turn**

(0+++)

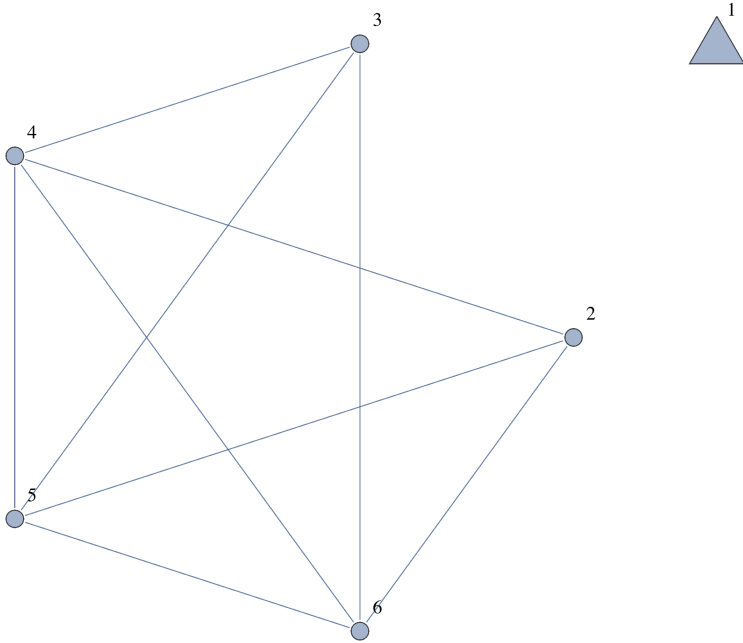
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 6, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(0+++)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

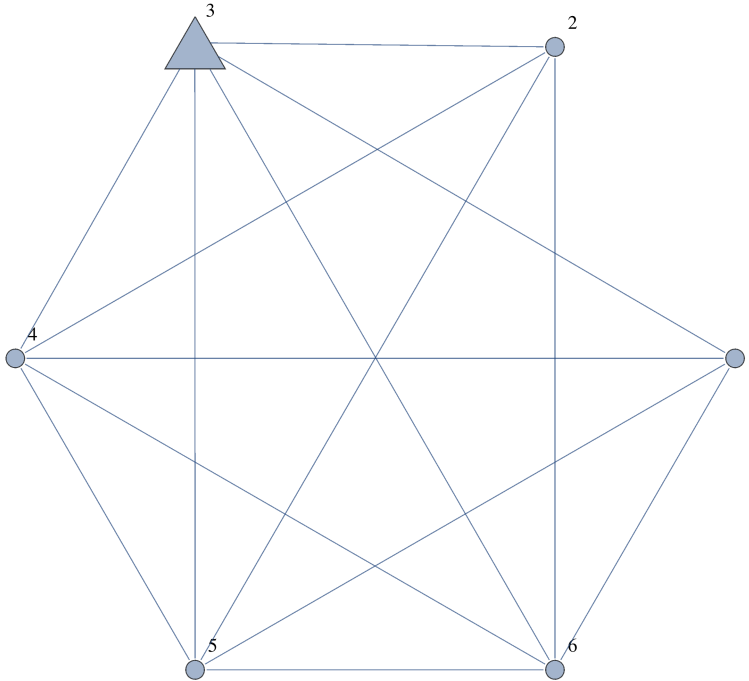


Player 2 lost!

### ■ Player 1's Turn

(+)

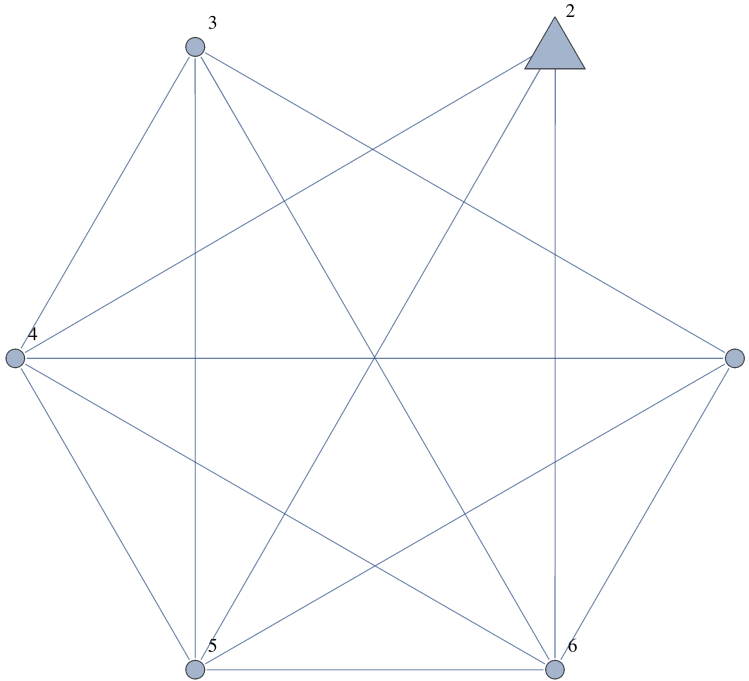
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6,  
  2 ↔ 3, 2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
  VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6,  
  2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



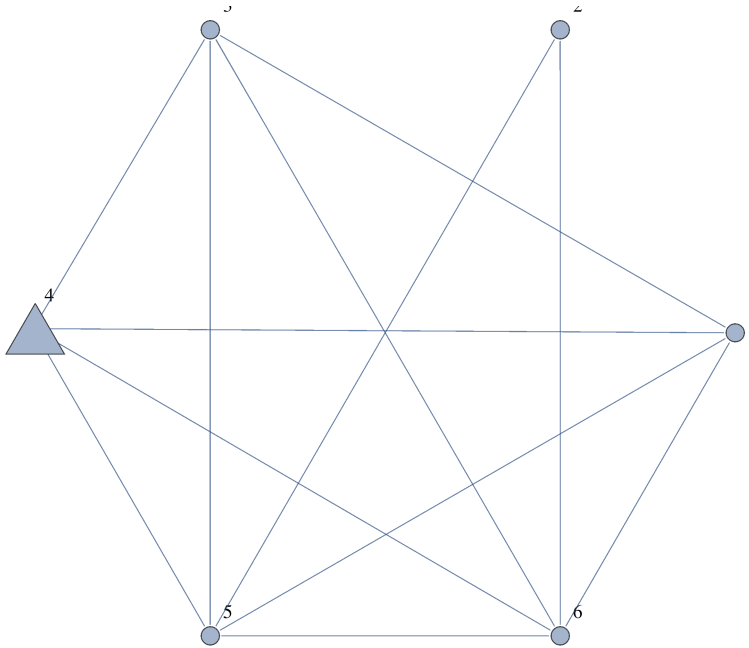
#### ■ Player 1's Turn

(+0)

```

Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
  VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]

```

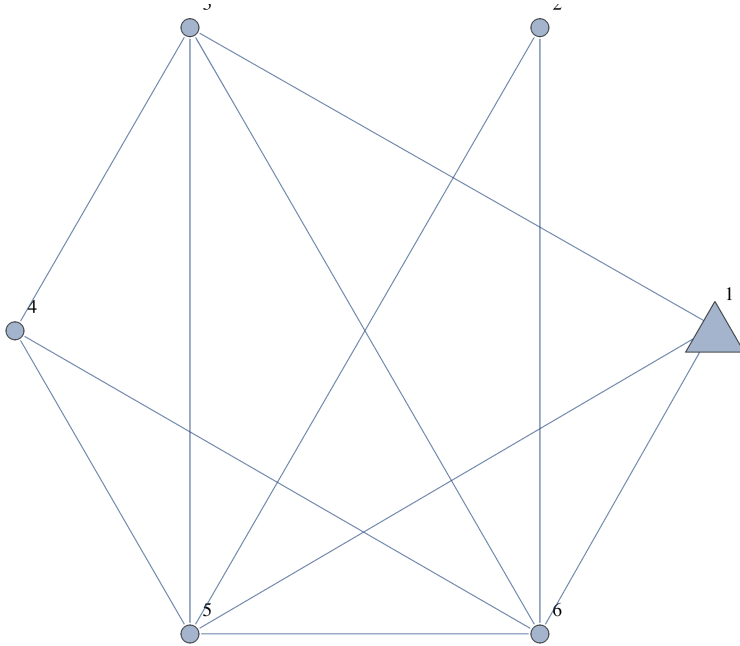


■ **Player 2's Turn**

(+0)



```
Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

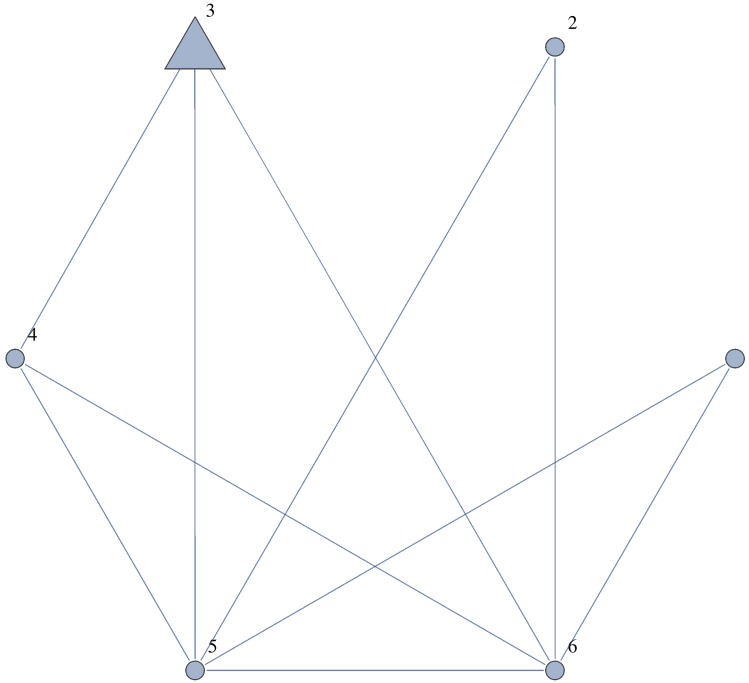


Player 2 has two nonisomorphic options, to  $v_3$  or  $v_5$ .

#### ■ Player 1's Turn

(+00\_3)

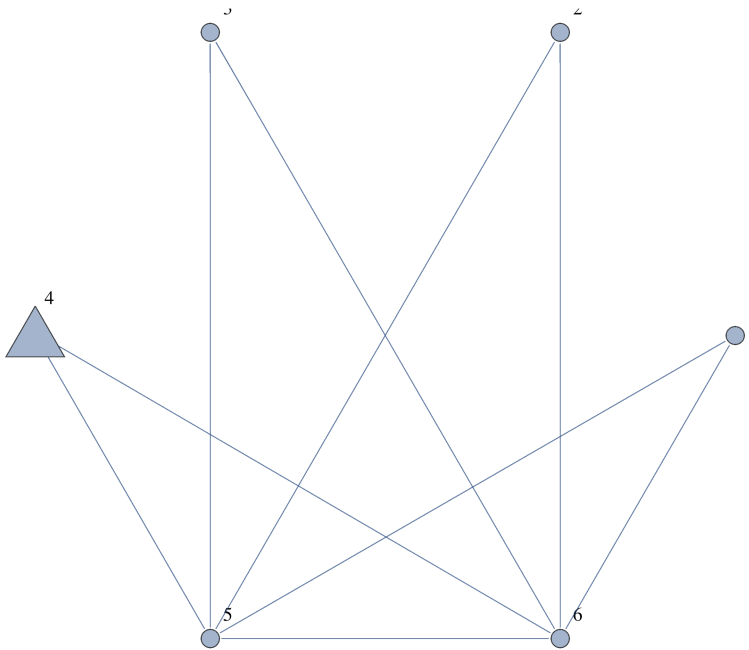
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
  VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+00\_3)

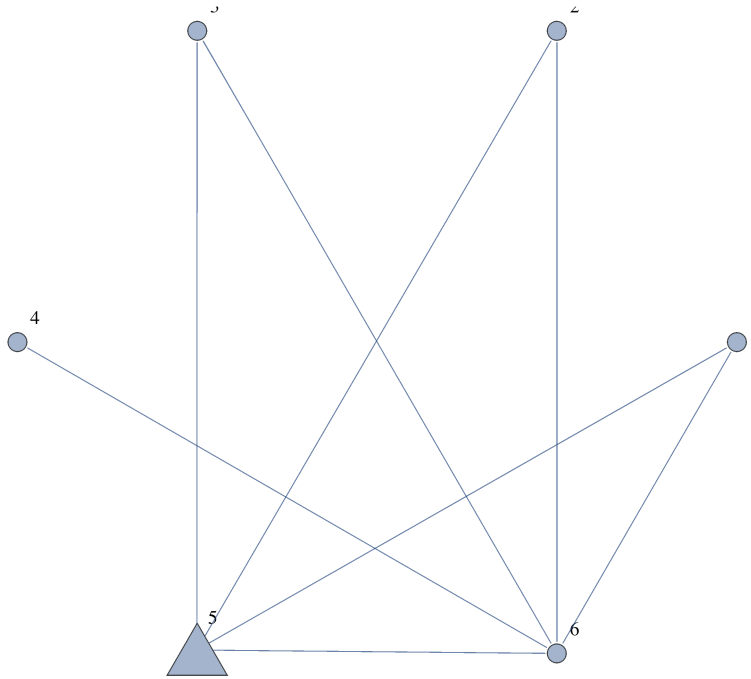
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},  
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 1's Turn

(+00\_30)

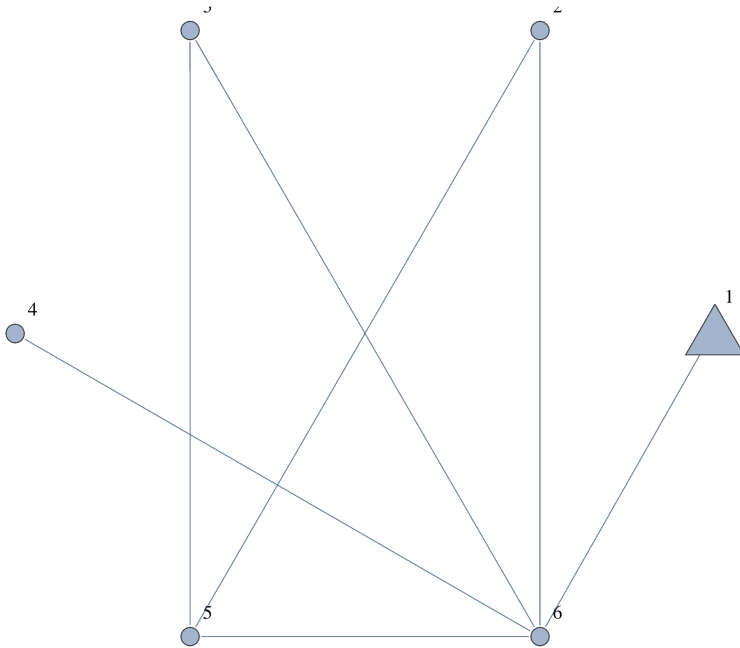
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(+00\_30)

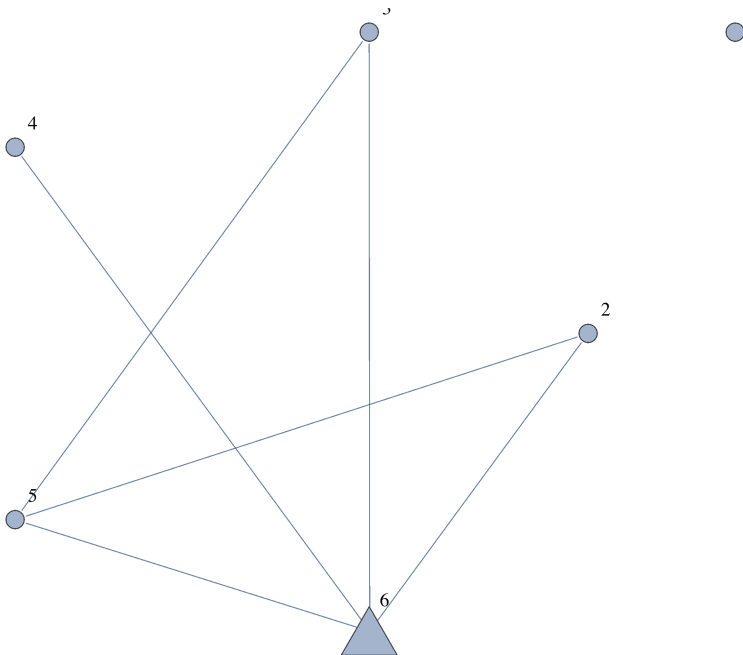
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 1's Turn

(+00\_300)

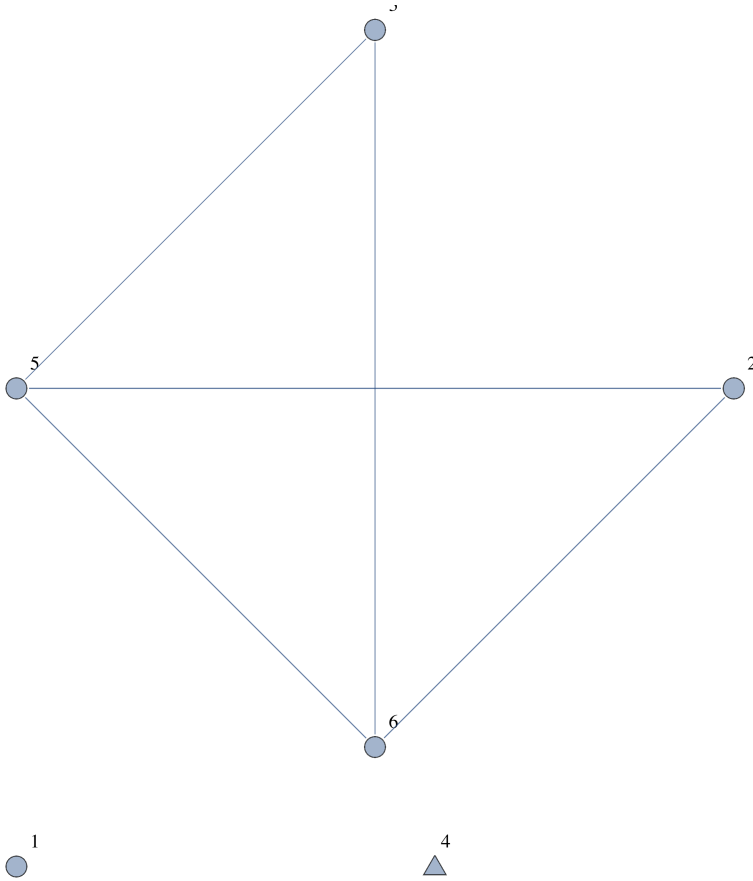
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(+00\_300)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},  
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

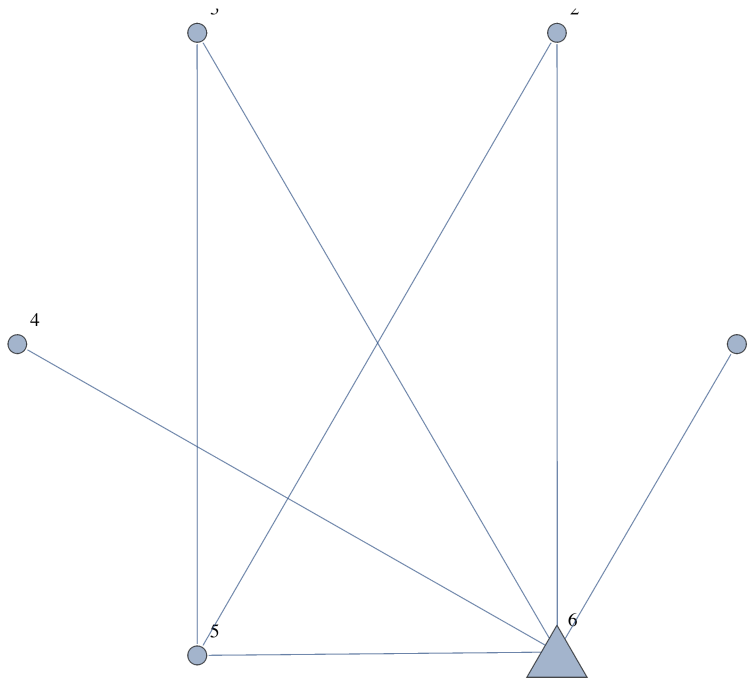


Player 2 lost!

■ **Player 1's Turn**

(+00\_30+)

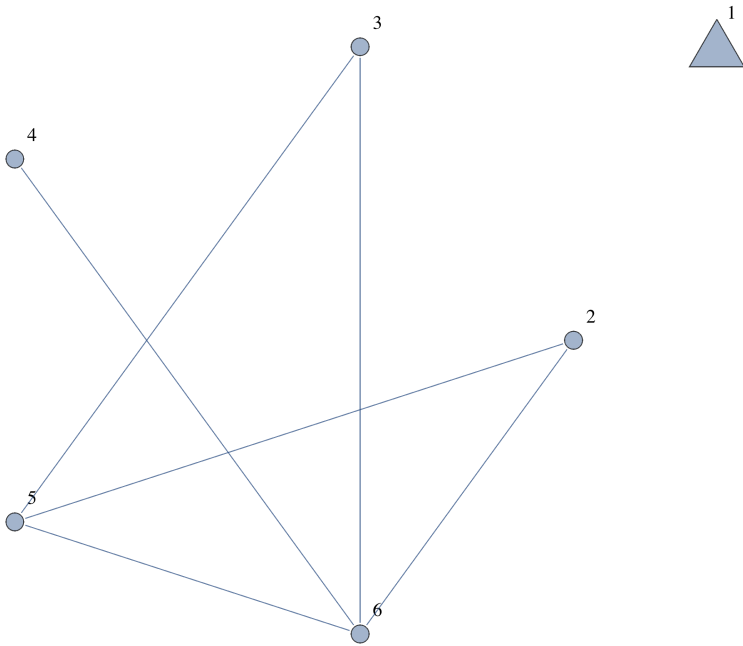
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+00\_30+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



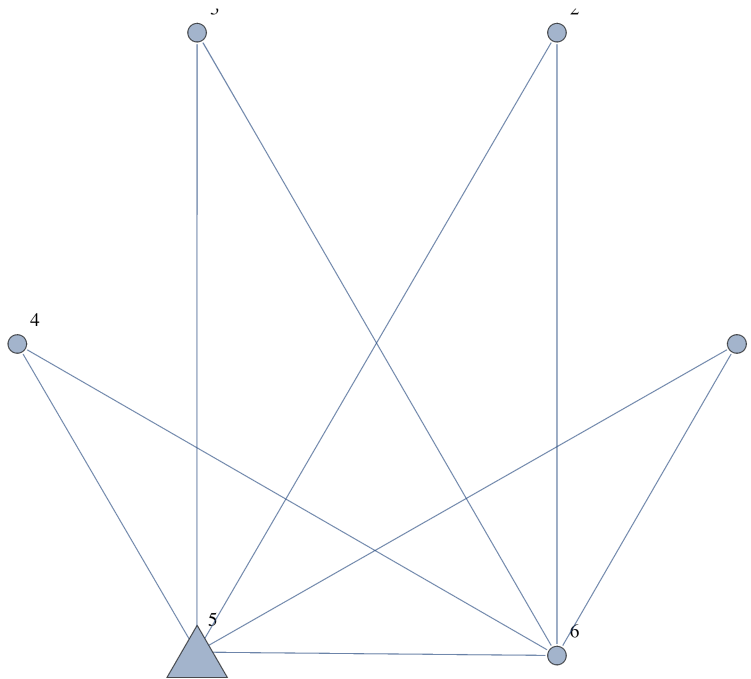
Player 2 lost!

■ Player 1's Turn

(+00\_3+)



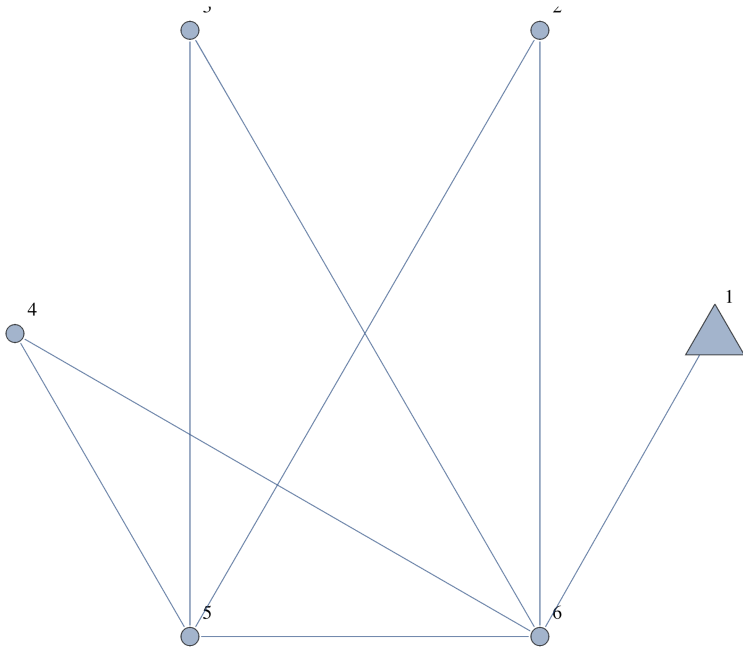
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(+00\_3+)

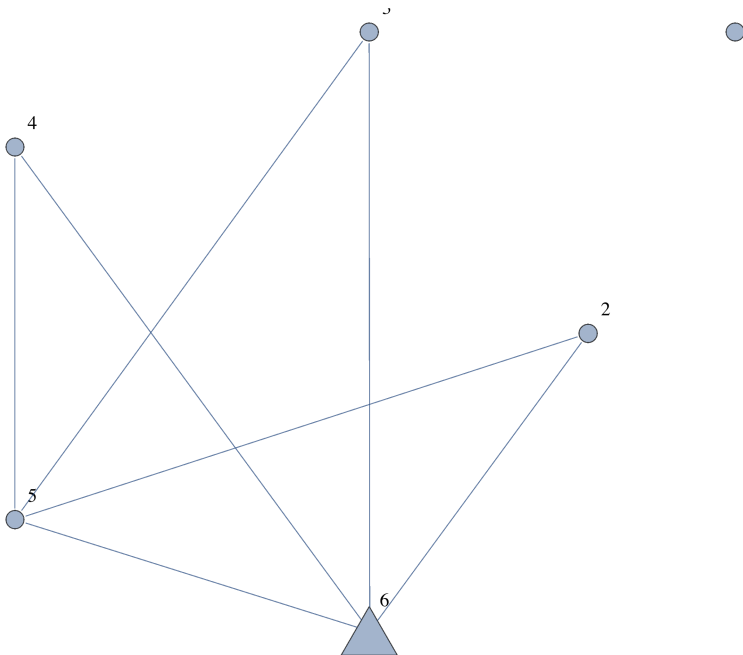
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(+00\_3+0)

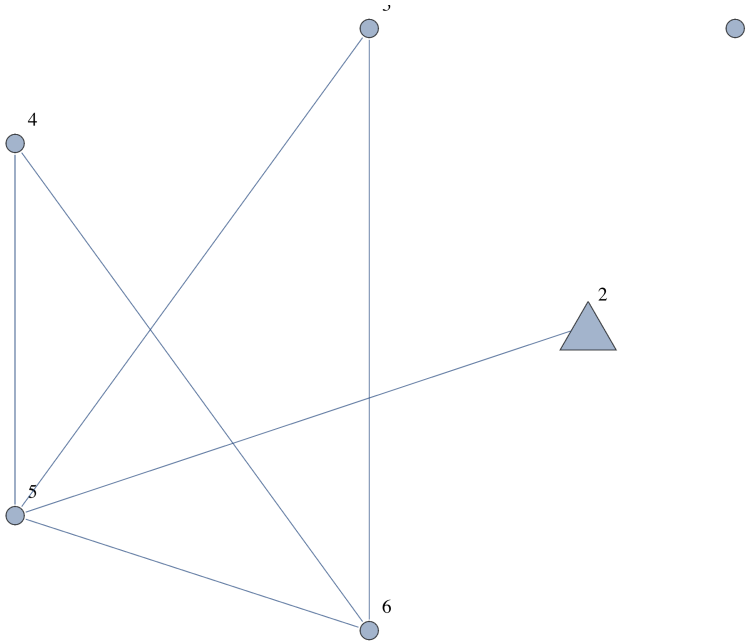
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+00\_3+0)

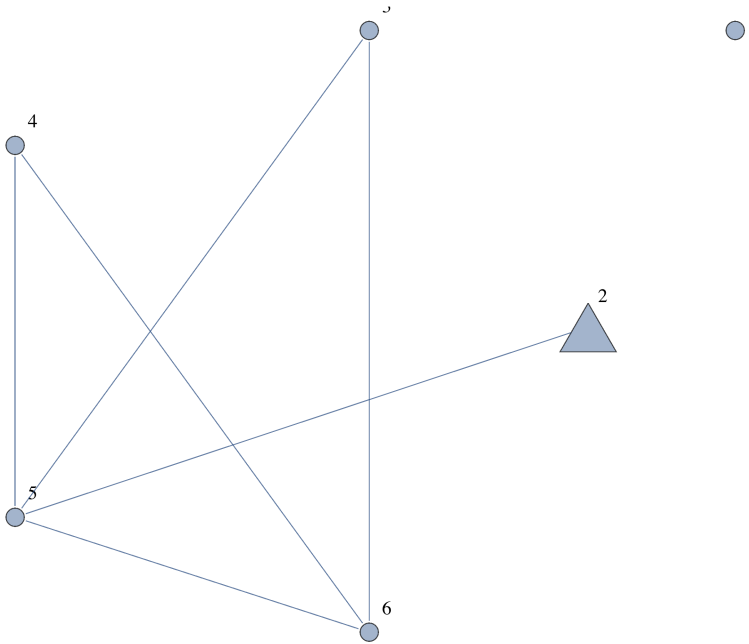
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+00\_3+0)

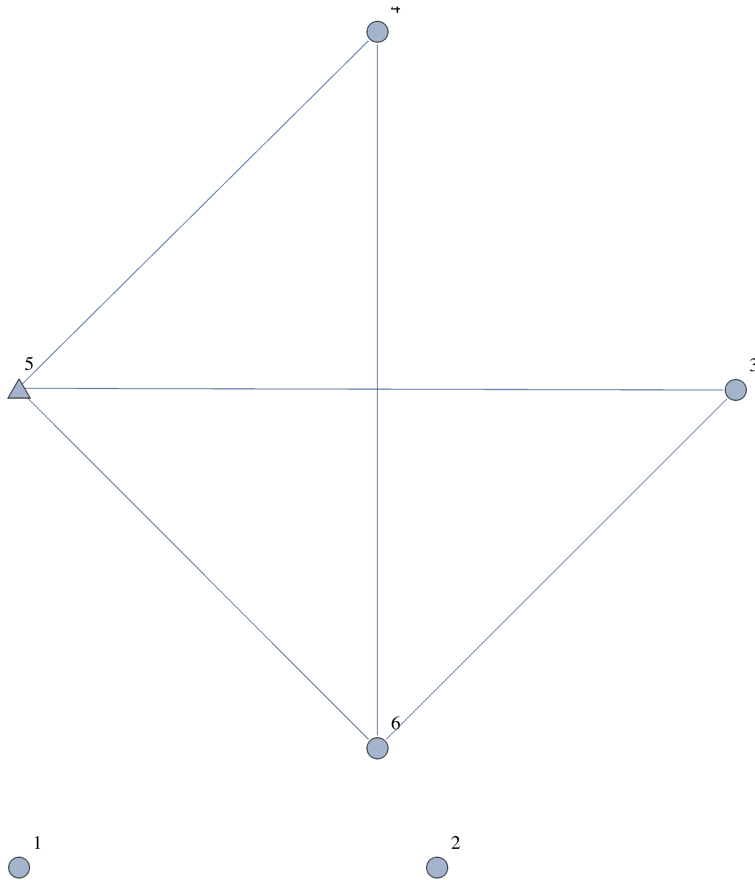
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(+00\_3+0+)

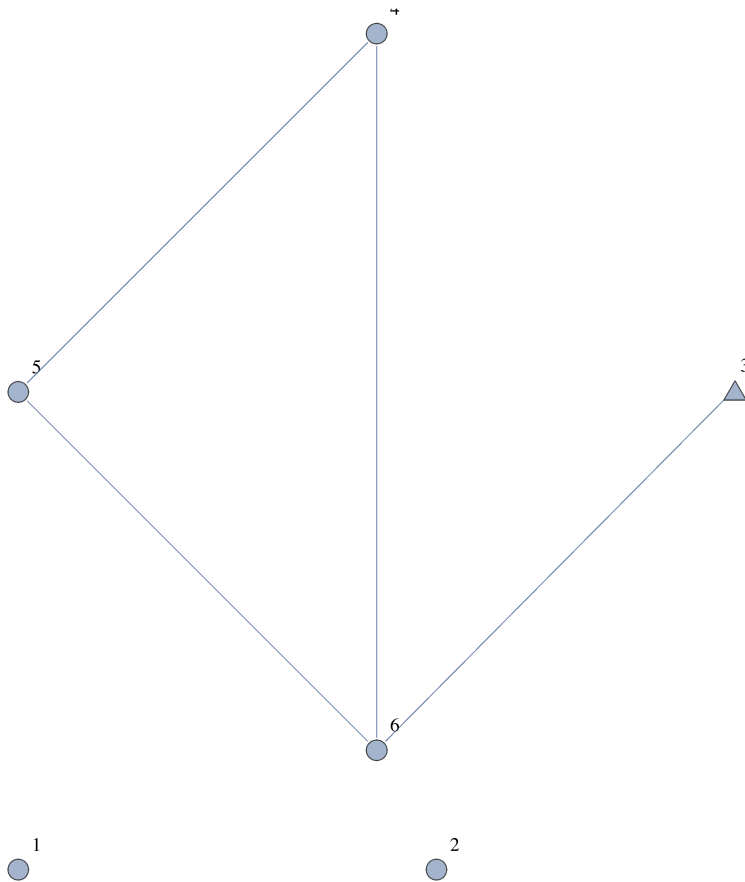
```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(+00\_3+0+)

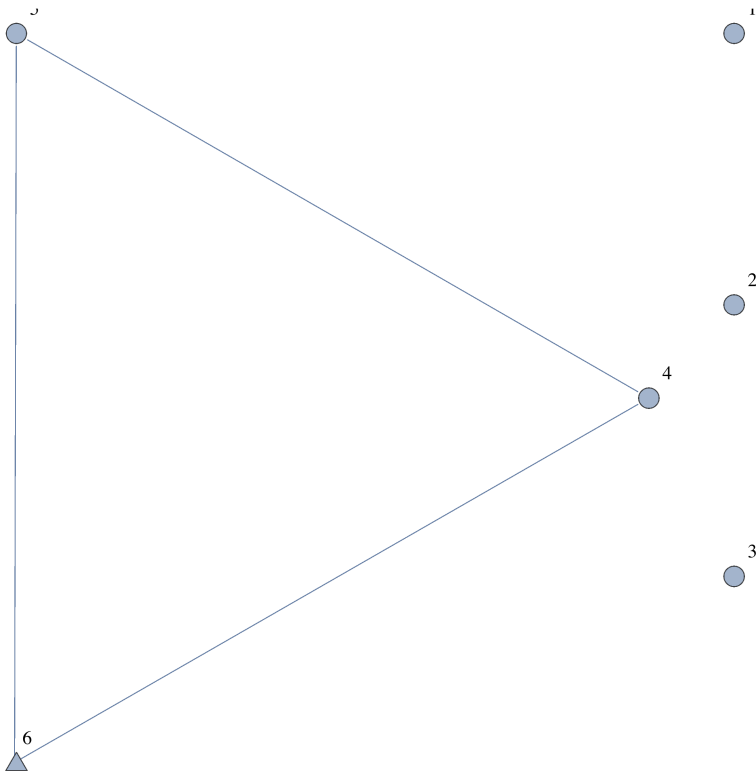
```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},
  VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 1's Turn**

(+00\_3+0+0)

```
Graph[{1, 2, 3, 4, 5, 6}, {4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

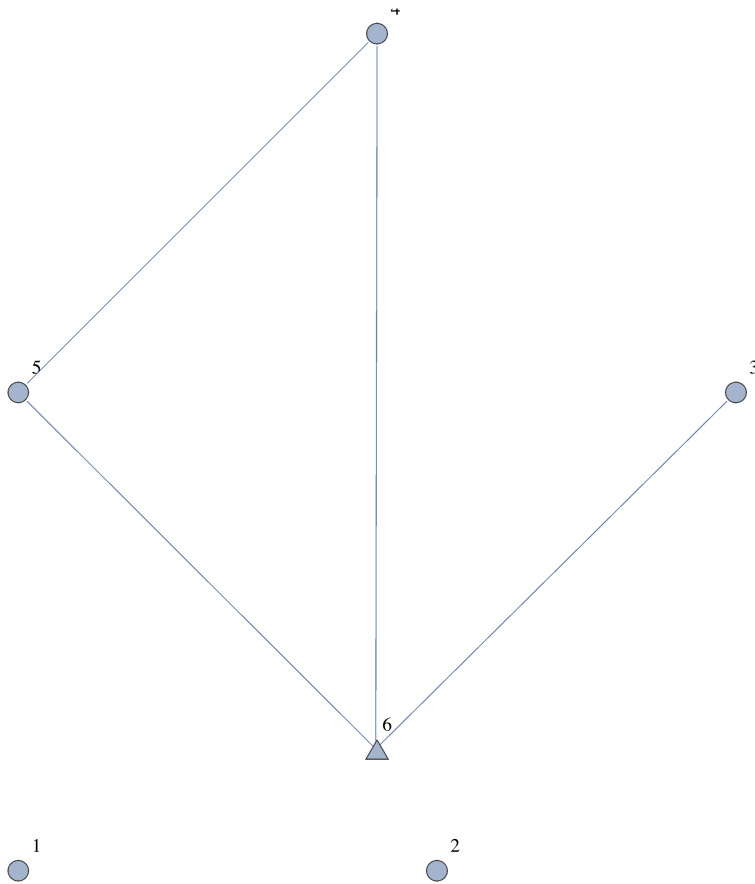


What remains is a  $K_3$ . Since the first player to play a  $K_3$  wins, Player 1 will win this game. Hence, Player 2 lost!

#### ■ Player 1's Turn

(+00\_3+0++)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

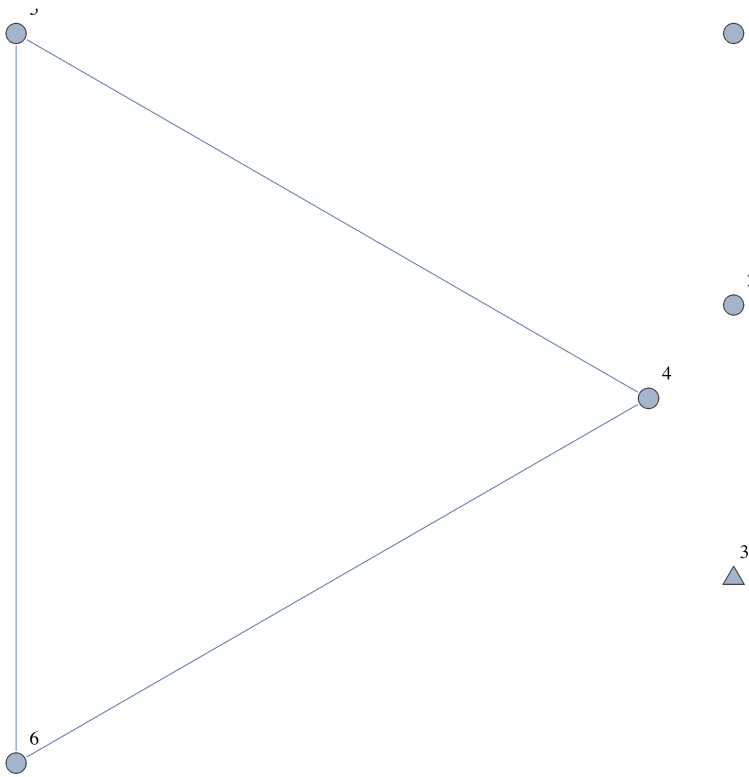


■ **Player 2's Turn**

(+00\_3+0++)



```
Graph[{1, 2, 3, 4, 5, 6}, {4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},
  VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

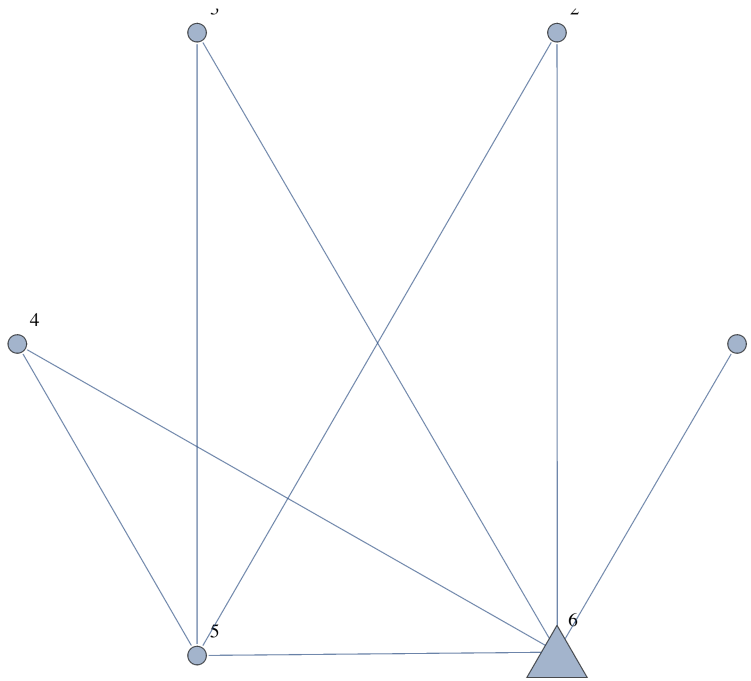


Player 2 lost!

■ **Player 1's Turn**

(+00\_3++)

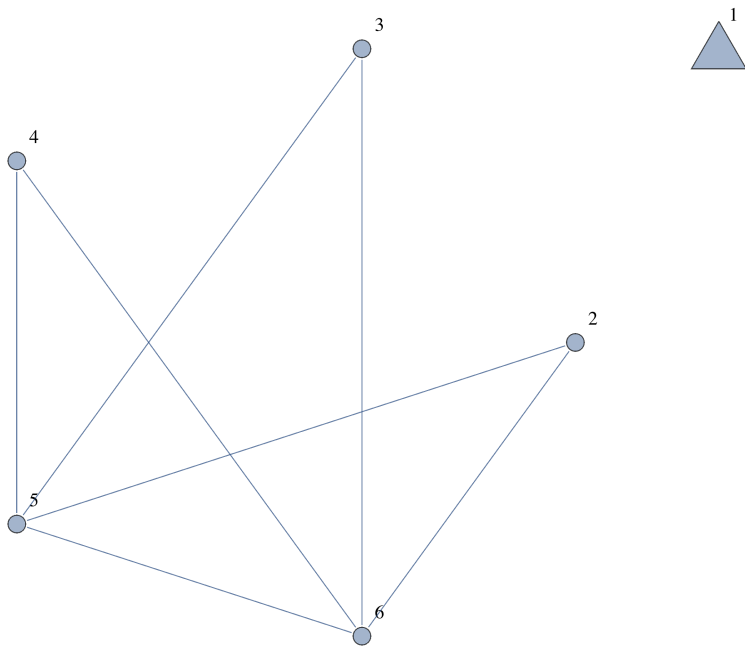
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(+00\_3++)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

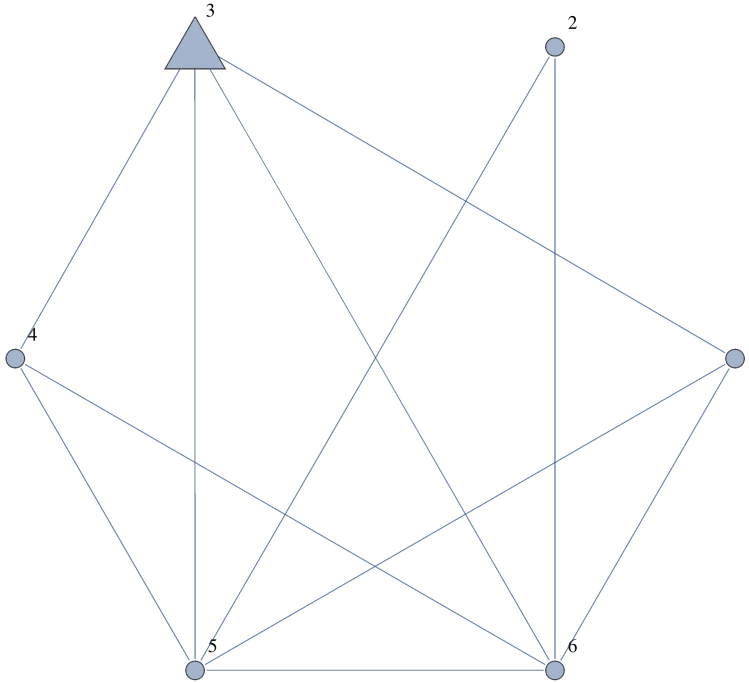


Player 2 lost!

■ **Player 1's Turn**

(+0+\_3)

```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 3, 1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
  VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



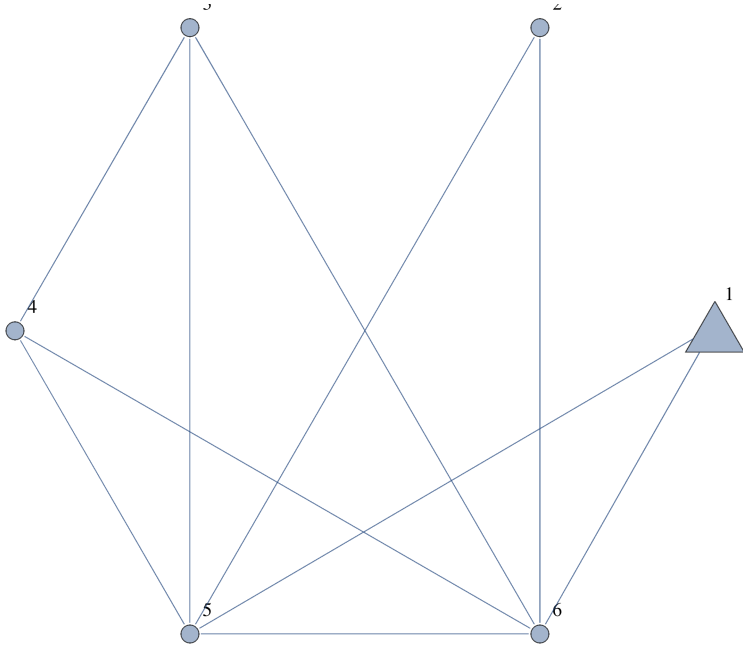
#### ■ Player 2's Turn

(+0+\_3)

```

Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]

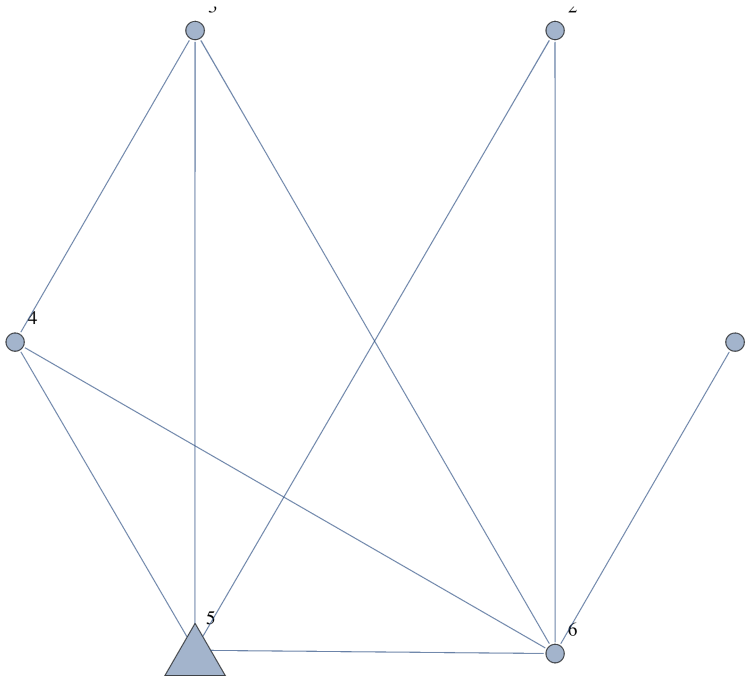
```



■ Player 1's Turn

(+0+\_30)

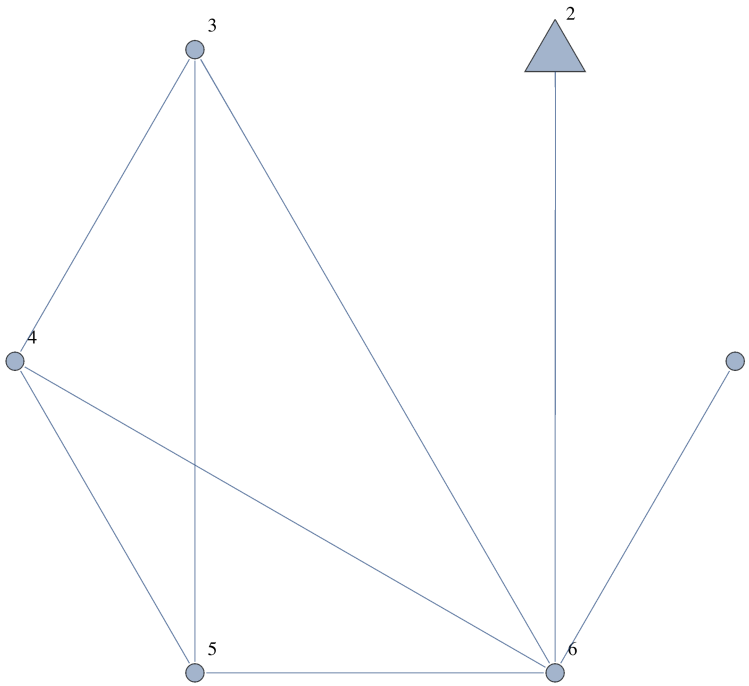
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(+0+\_30)

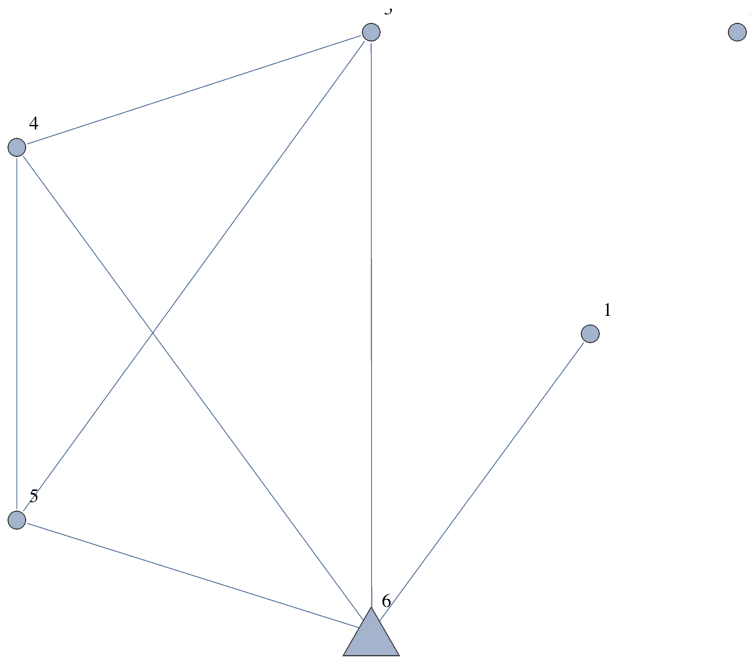
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(+0+\_300)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

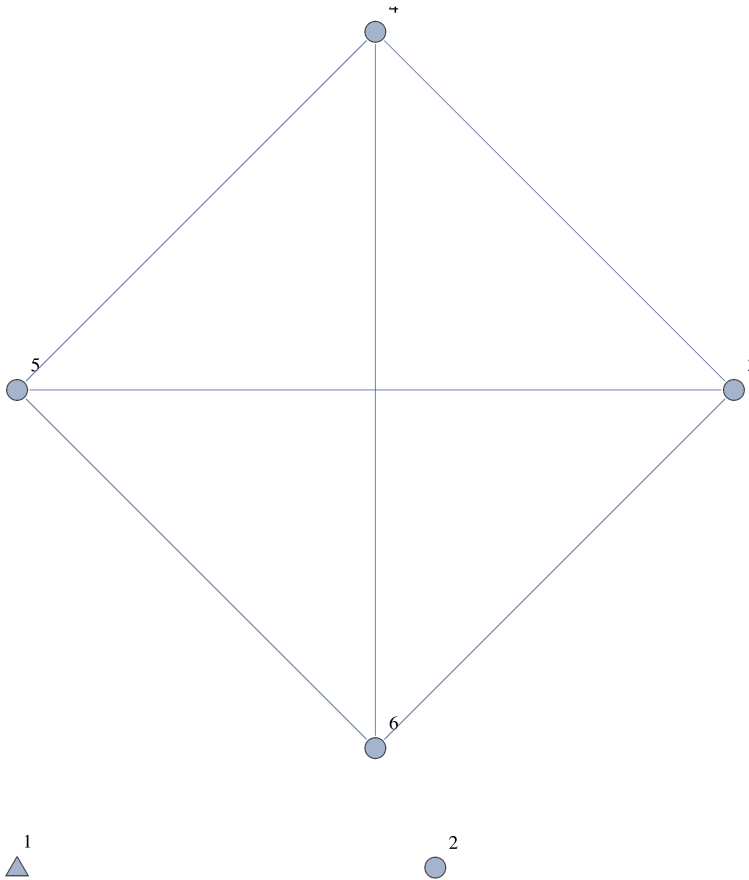


■ Player 2's Turn

(+0+\_300)



```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

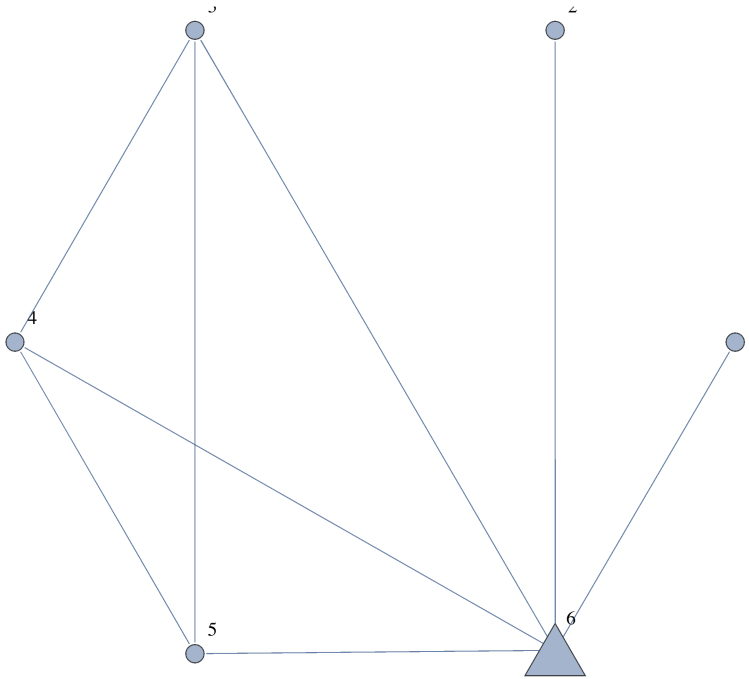


Player 2 lost!

■ **Player 1's Turn**

(+0+\_30+)

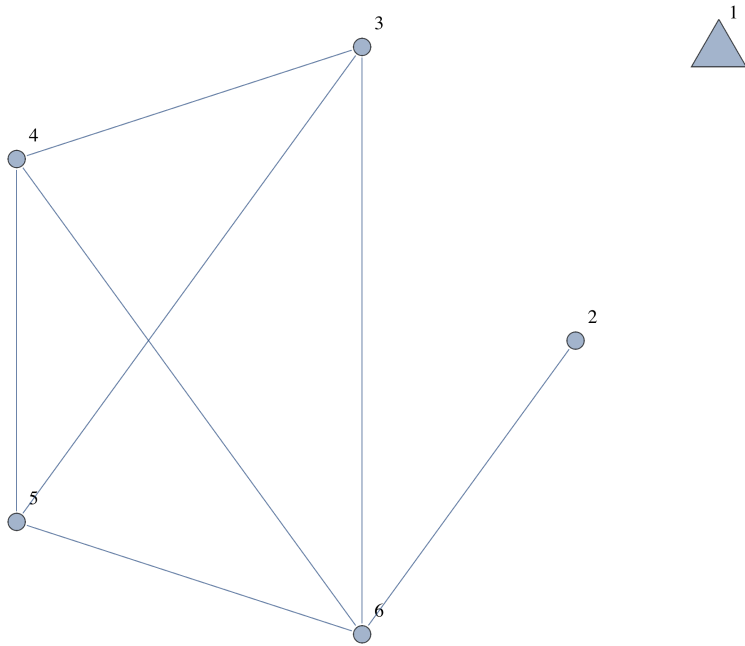
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+0+\_30+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

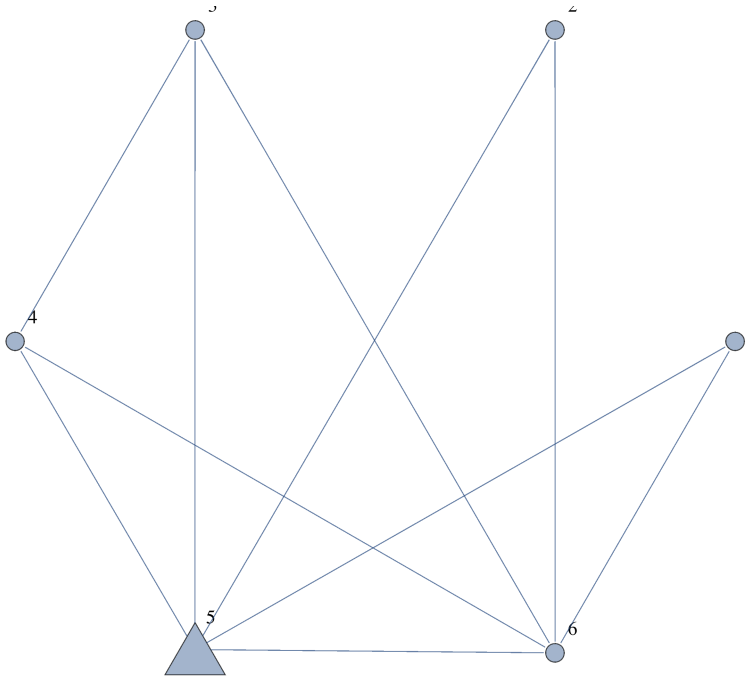


Player 2 lost!

■ Player 1's Turn

(+0+\_3+)

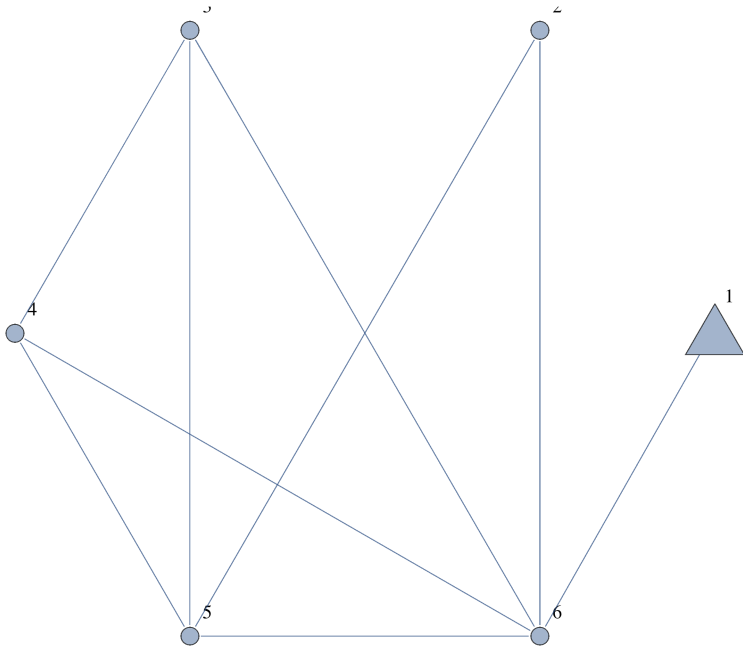
```
Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+0+\_3+)

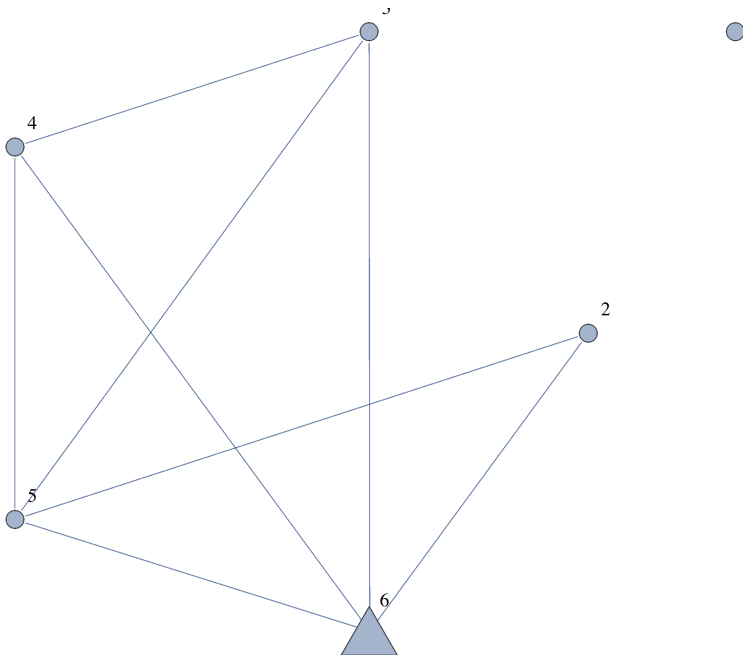
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 6, 2 -> 5, 2 -> 6, 3 -> 4, 3 -> 5, 3 -> 6, 4 -> 5, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(+0+\_3+0)

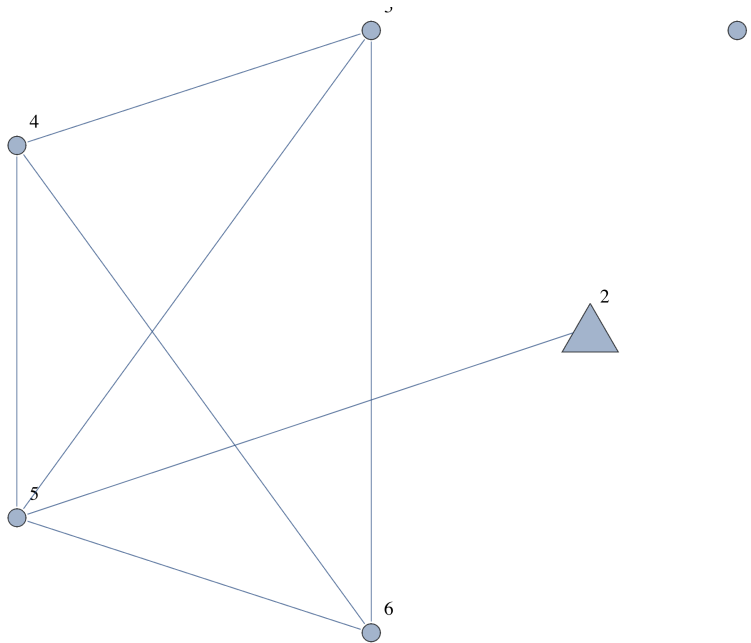
```
Graph[{1, 2, 3, 4, 5, 6}, {2 -> 5, 2 -> 6, 3 -> 4, 3 -> 5, 3 -> 6, 4 -> 5, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(+0+\_3+0)

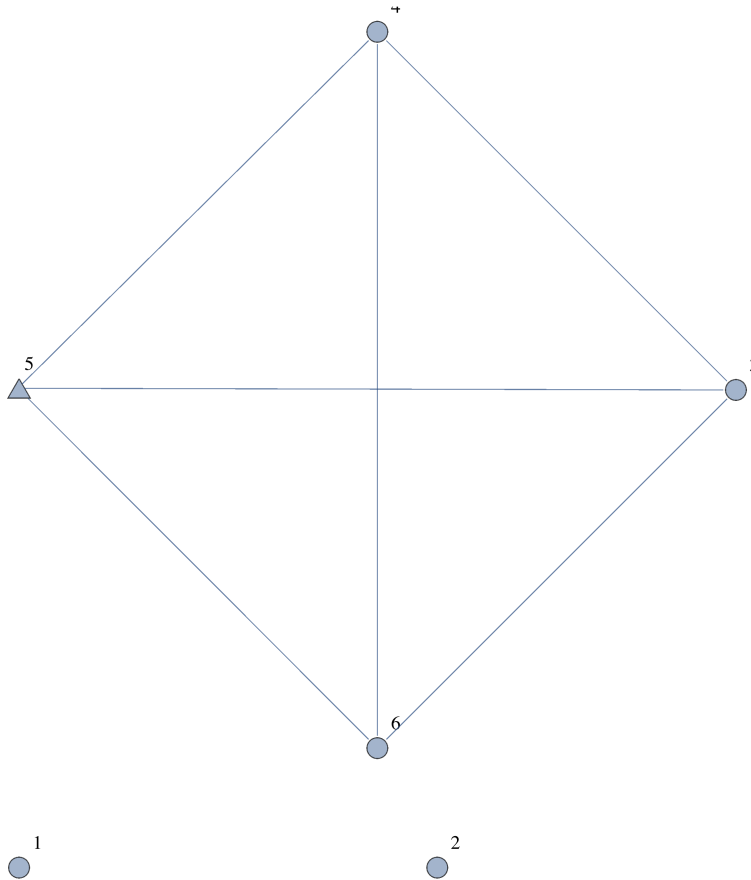
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 1's Turn**

(+0+\_3+00)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

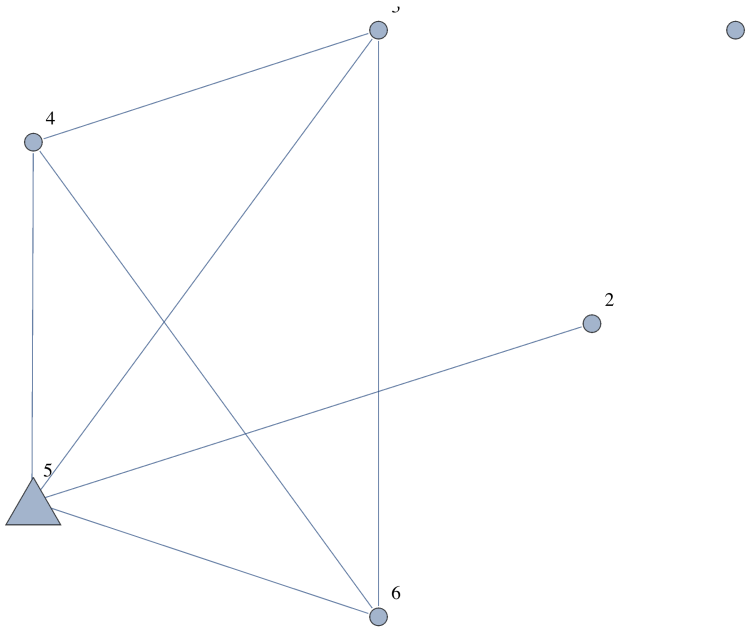


What remains is the  $K_4$ . Since the first player to play a  $K_4$  wins, Player 1 will win this game. Hence Player 2 lost!

#### ■ Player 1's Turn

(+0+\_3+0+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

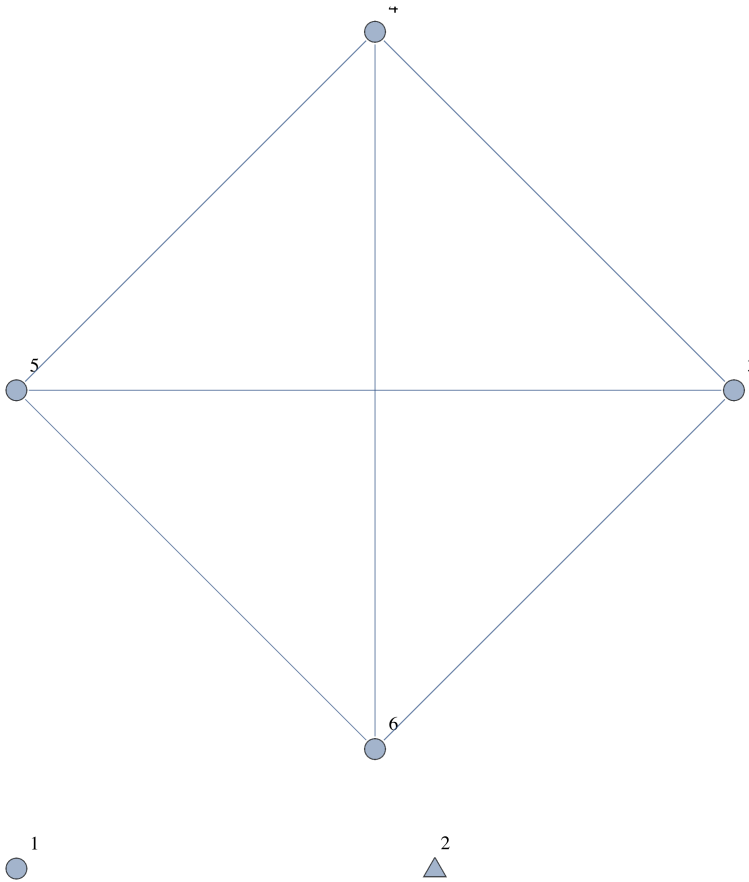


■ Player 2's Turn

(+0+\_3+0+)



```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

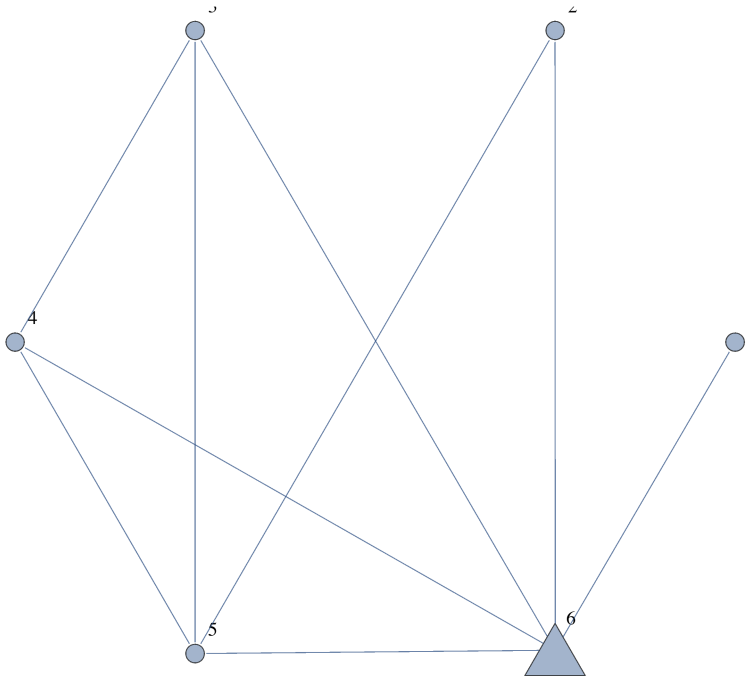


Player 2 lost!

■ **Player 1's Turn**

(+0+\_3++)

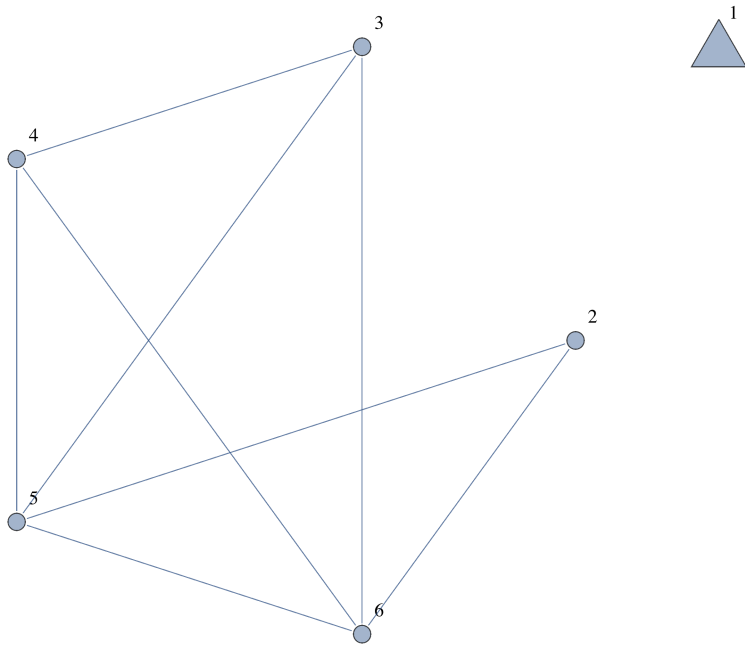
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(+0+\_3++)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

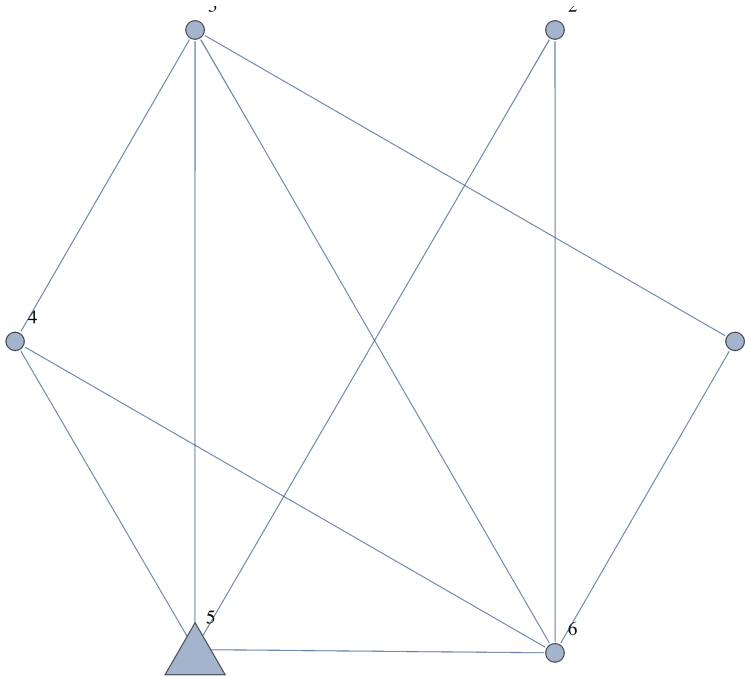


Player 2 lost!

■ Player 1's Turn

(+00\_5)

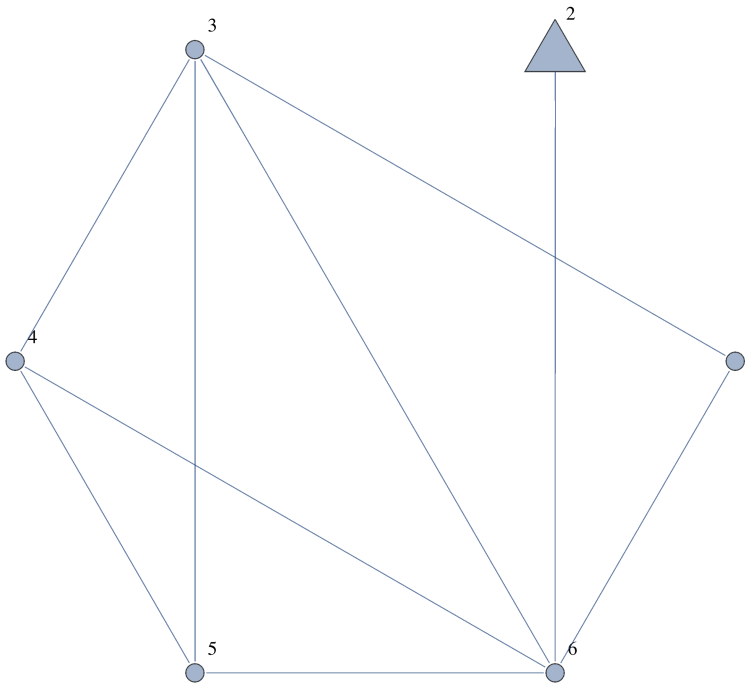
```
Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+00\_5)

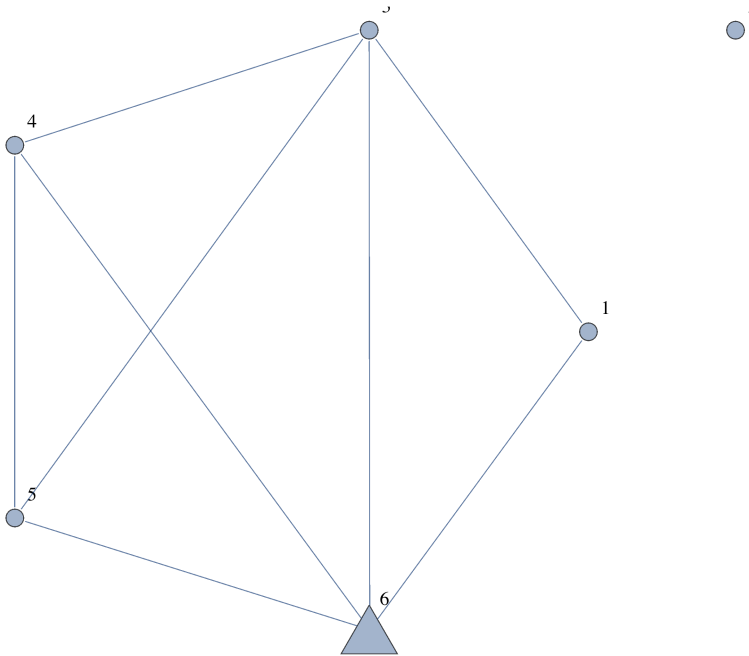
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 1's Turn

(+00\_50)

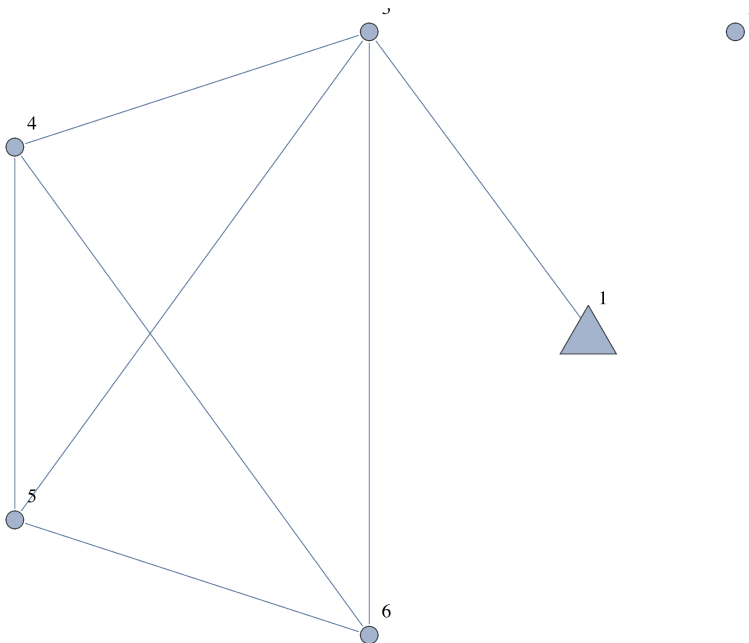
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 3, 1 -> 6, 3 -> 4, 3 -> 5, 3 -> 6, 4 -> 5, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+00\_50)

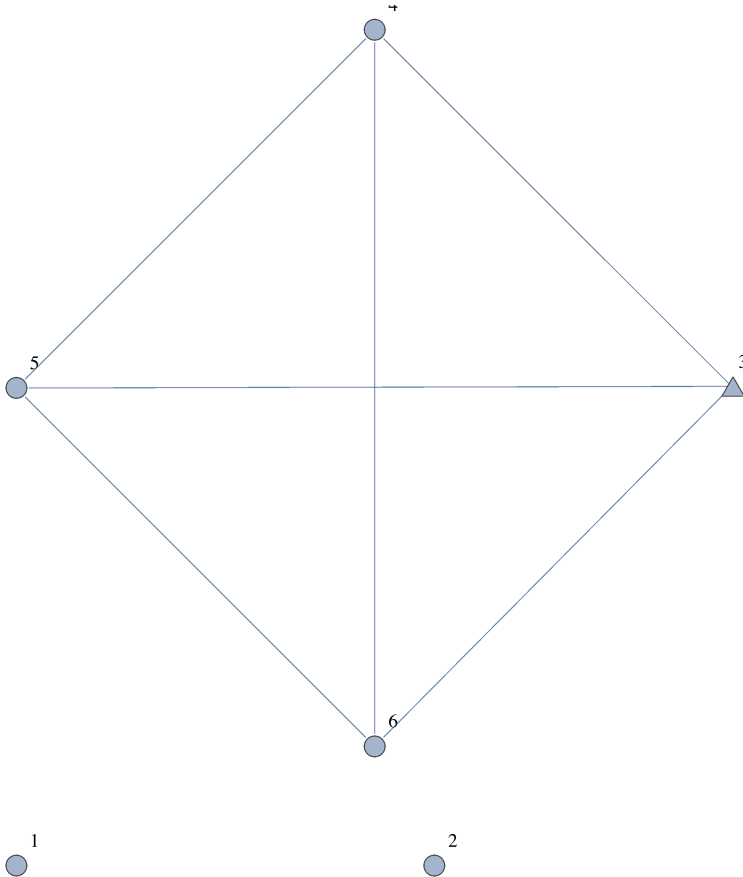
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 3, 3 -> 4, 3 -> 5, 3 -> 6, 4 -> 5, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(+00\_500)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},
  VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

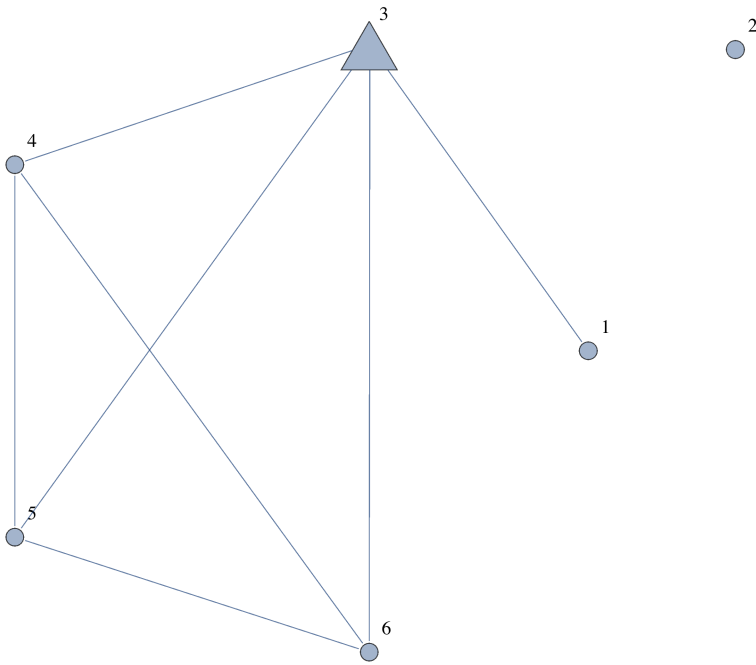


What remains is the  $K_4$ . Since the first player to play a  $K_4$  wins, Player 1 will win this game. Hence, Player 2 lost!

■ Player 1's Turn

(+00\_50+)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

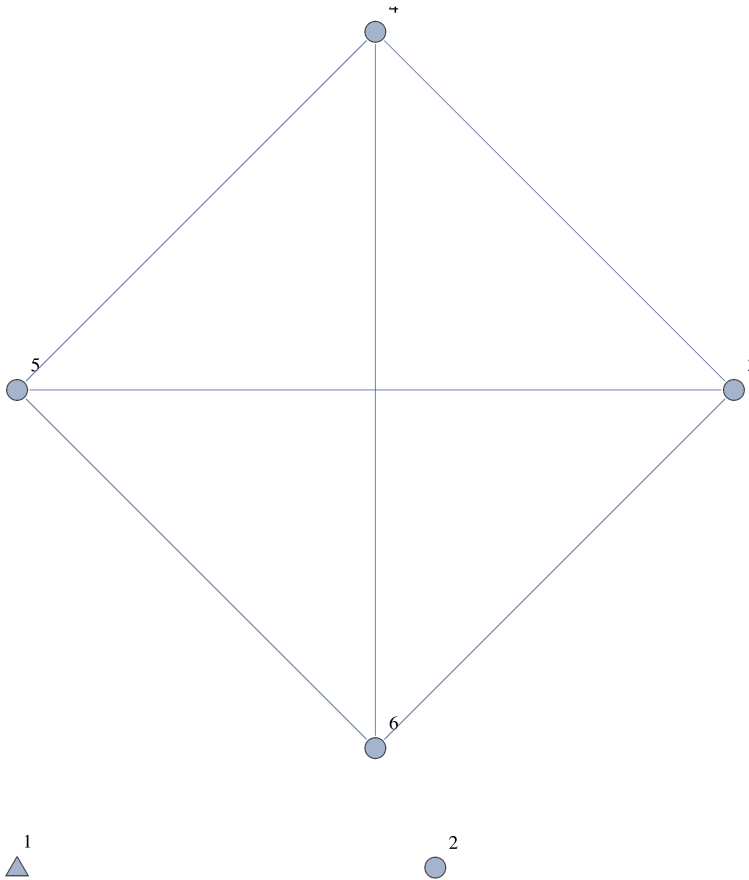


■ Player 2's Turn

(+00\_50+)



```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

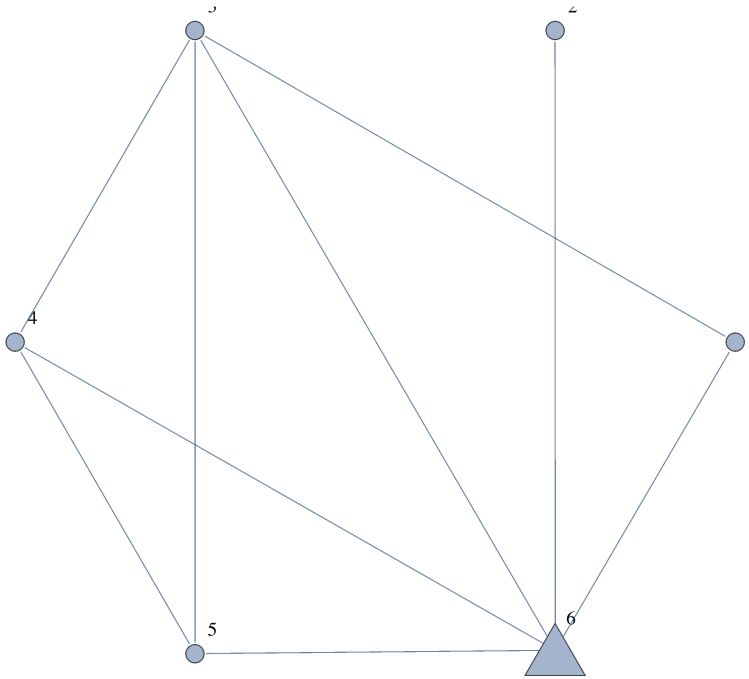


Player 2 lost!

■ **Player 1's Turn**

(+00\_5+)

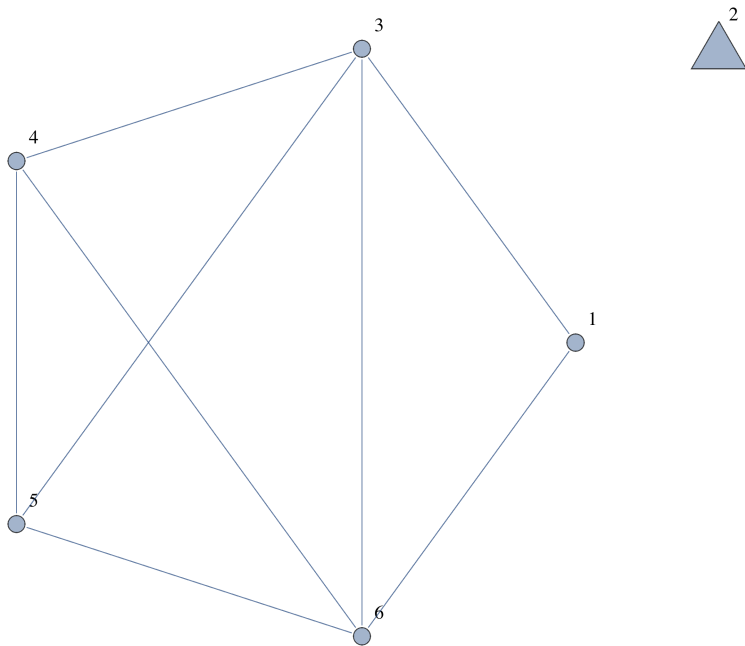
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+00\_5+)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

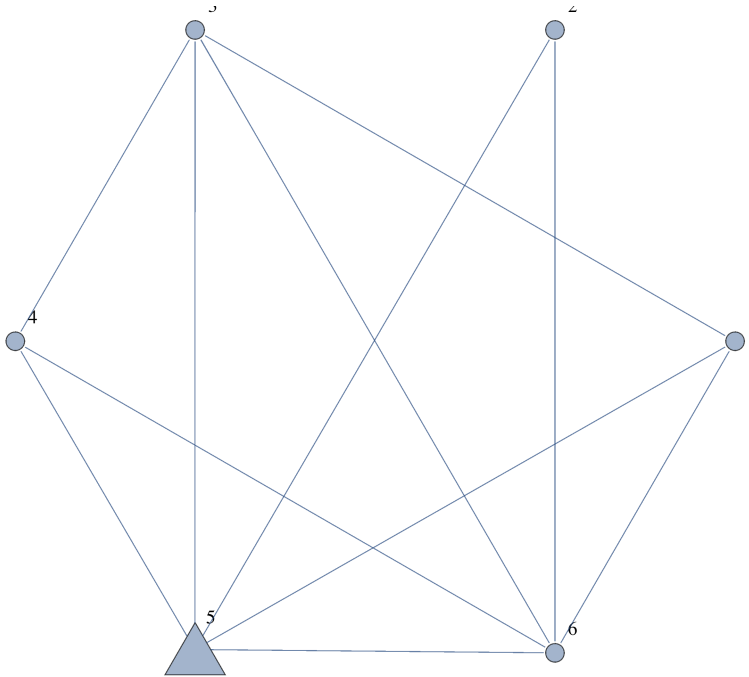


Player 2 lost!

■ **Player 1's Turn**

(+0+\_5)

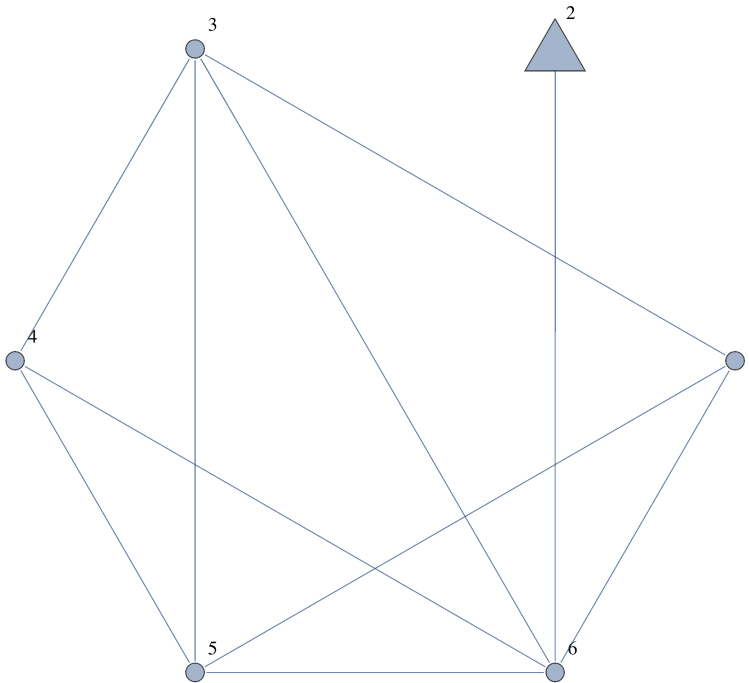
```
Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+0+\_5)

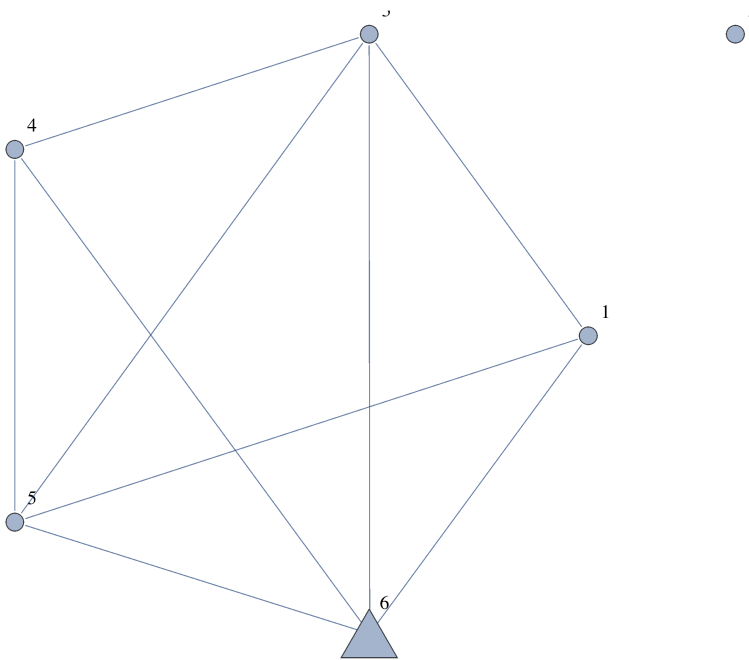
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 3, 1 ↔ 5, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 1's Turn

(+0+\_50)

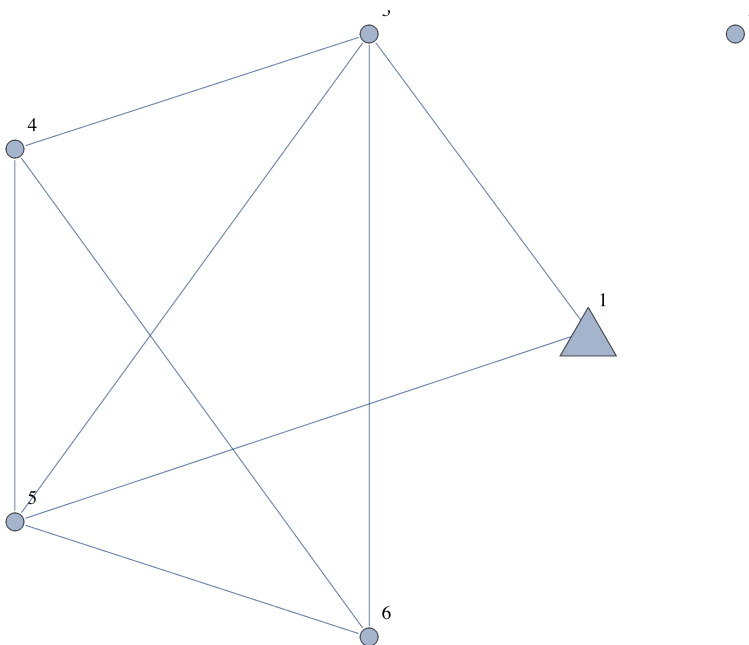
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 5, 1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+0+\_50)

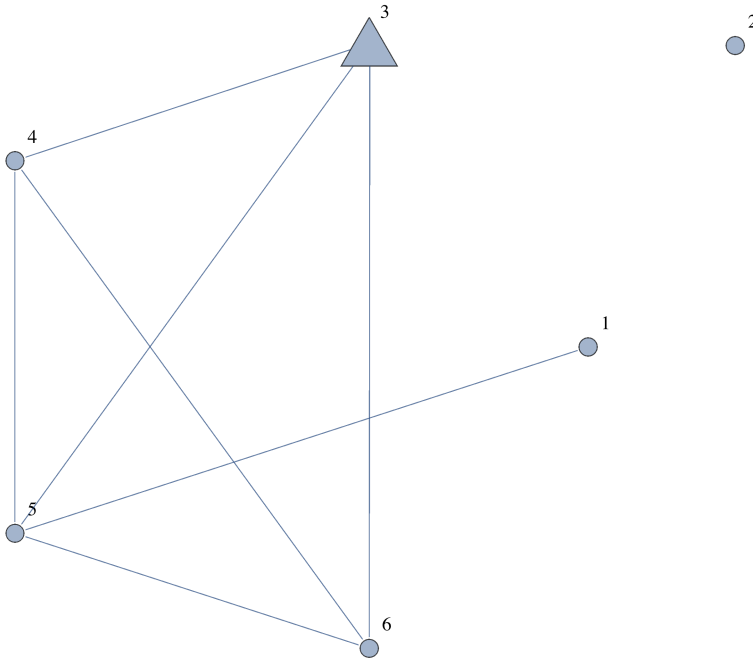
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



**■ Player 1's Turn**

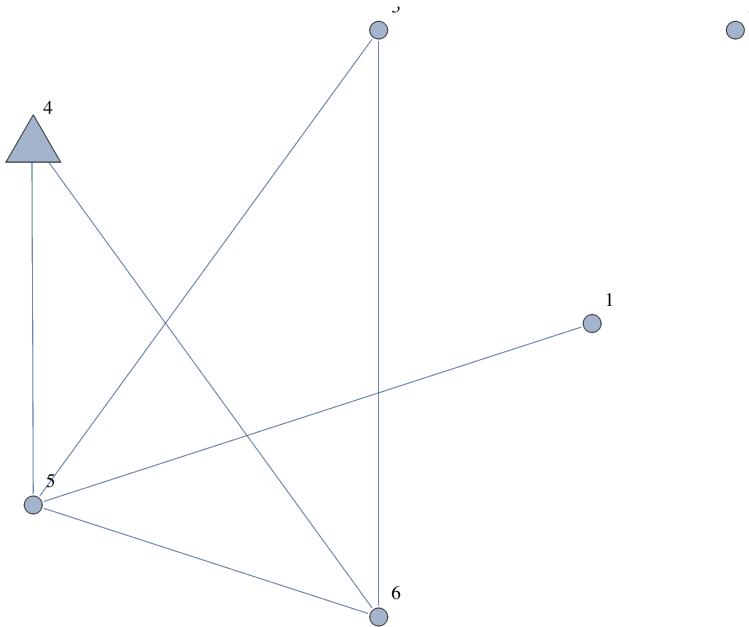
(+0+\_500)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

**■ Player 2's Turn**

(+0+\_500)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



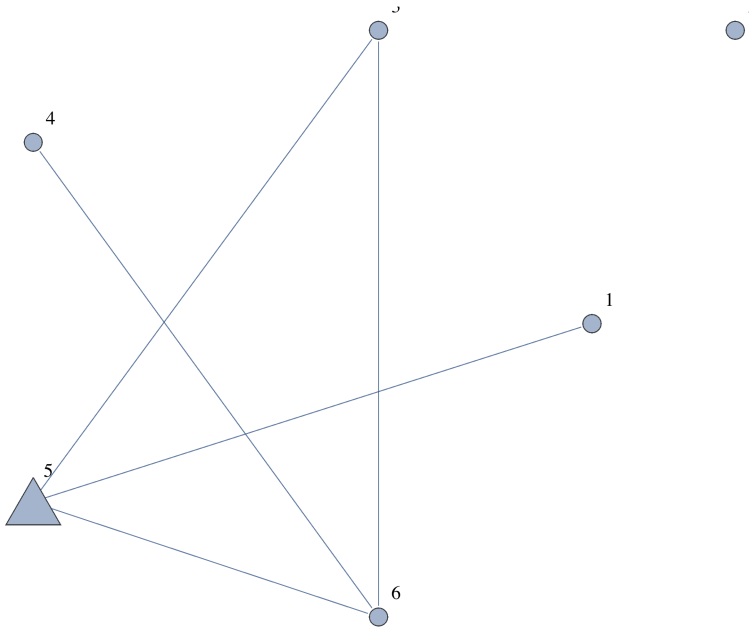
Player 2 has two nonisomorphic options, to v\_5 or v\_6.

■ Player 1's Turn

(+0+\_5000\_5)



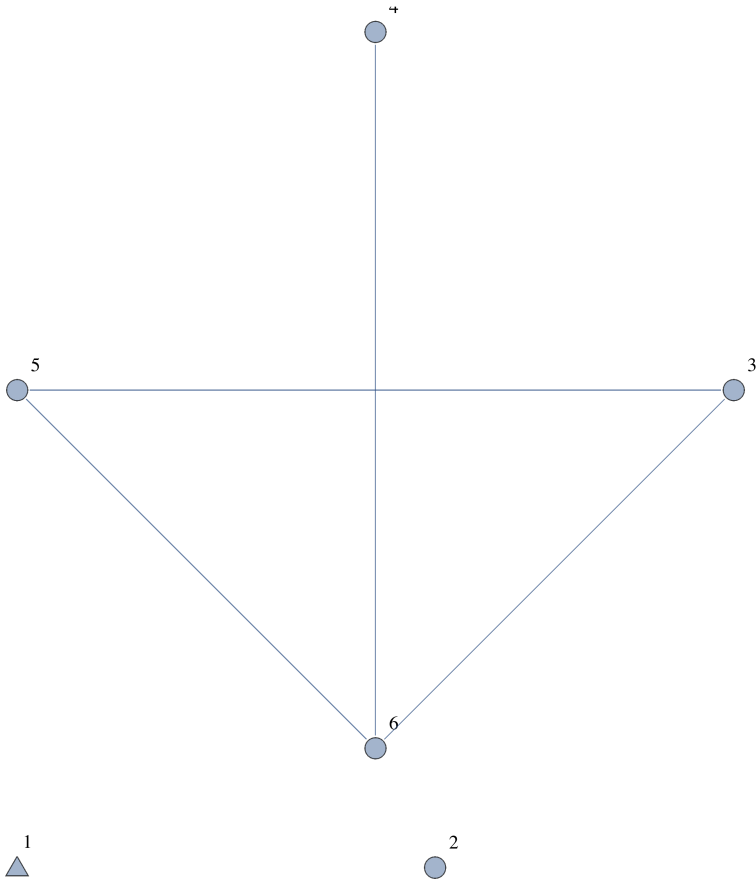
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+0+\_5000\_5)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

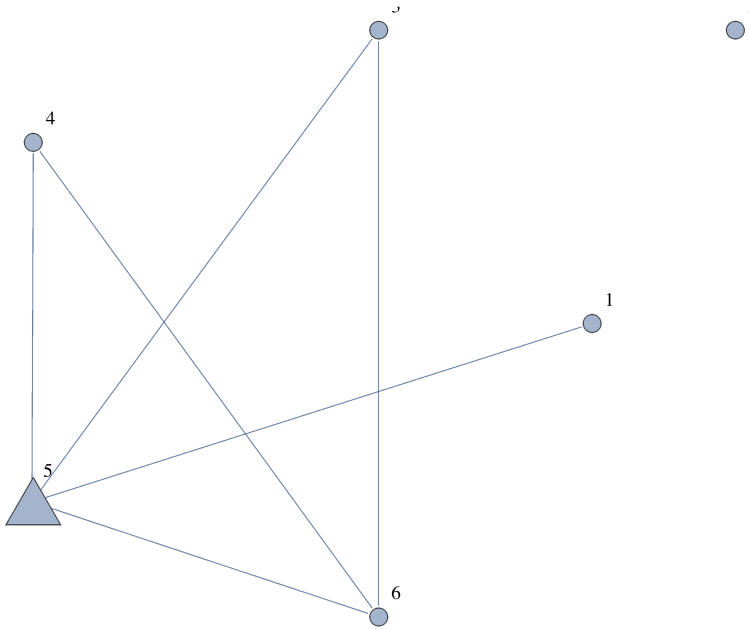


Player 2 lost!

■ Player 1's Turn

(+0+\_500+\_5)

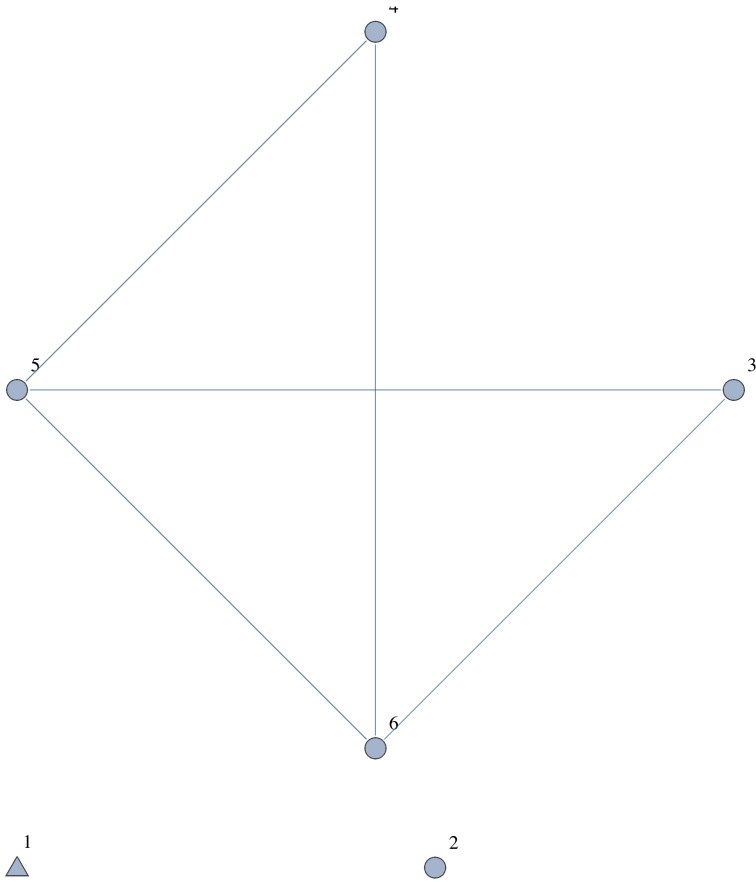
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+0+\_500+\_5)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

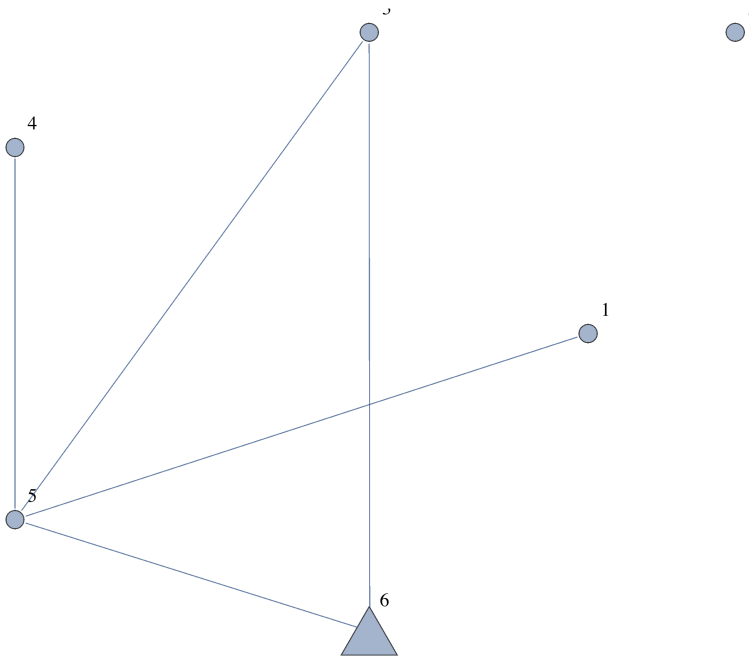


Player 2 lost!

■ Player 1's Turn

(+0+\_5000\_6)

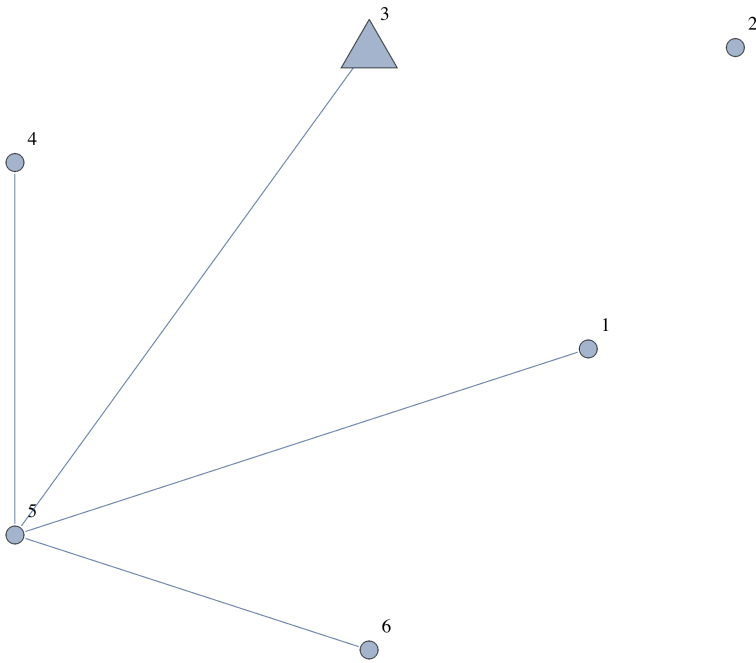
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+0+\_5000\_6)

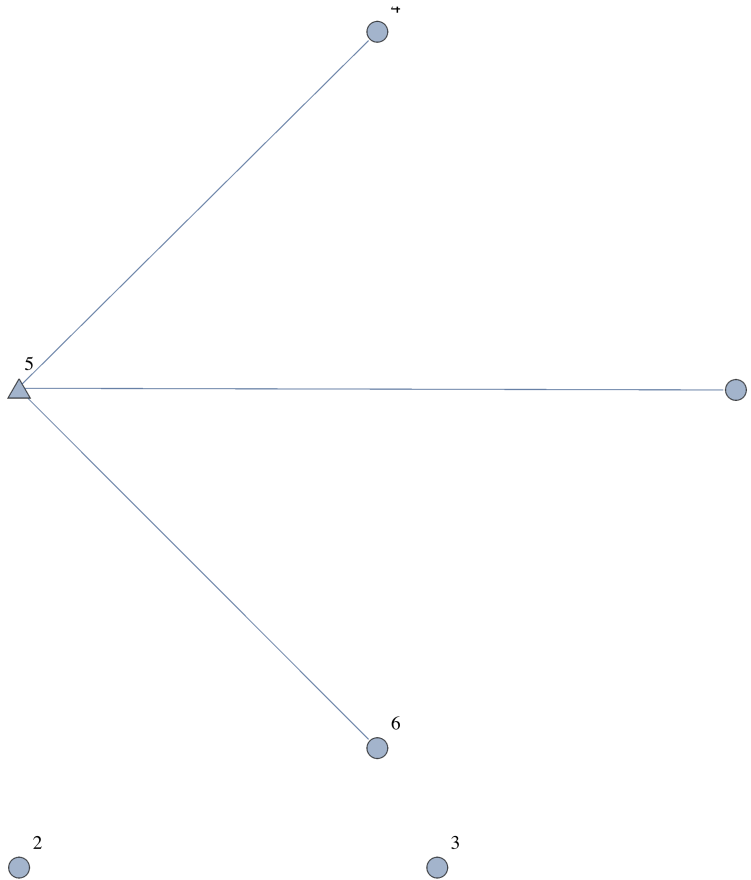
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 4 ↔ 5, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(+0+\_5000\_60)

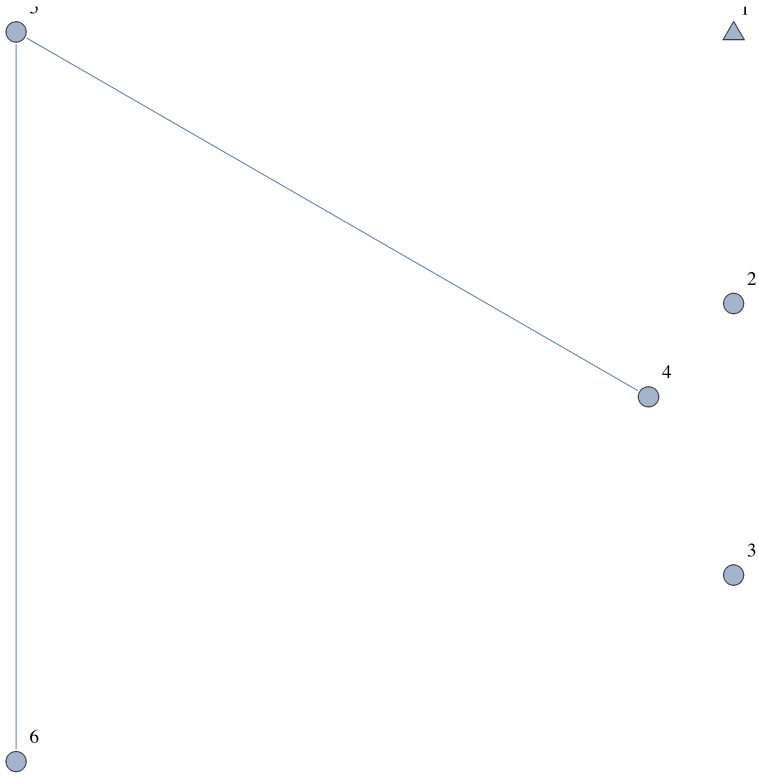
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 4 ↔ 5, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(+0+\_5000\_60)

```
Graph[{1, 2, 3, 4, 5, 6}, {4 ↔ 5, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



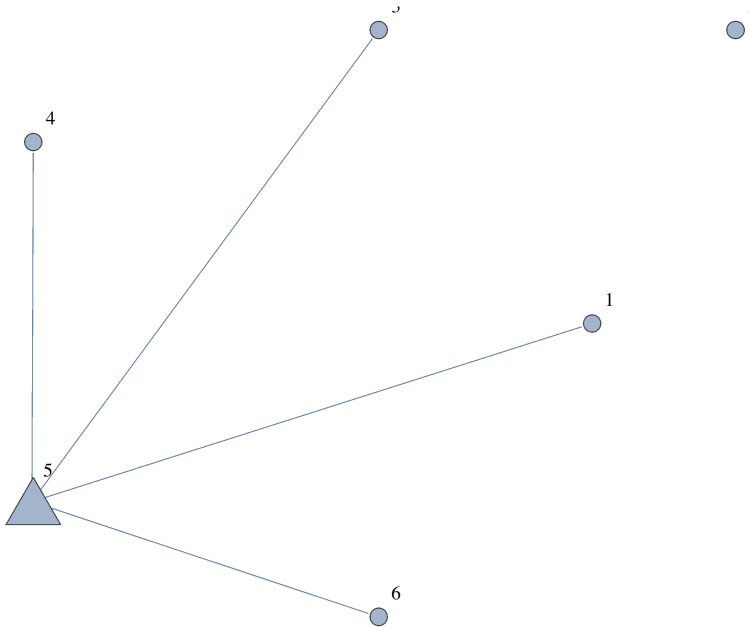
Player 2 lost!

■ Player 1's Turn

(+0+\_5000\_6+)



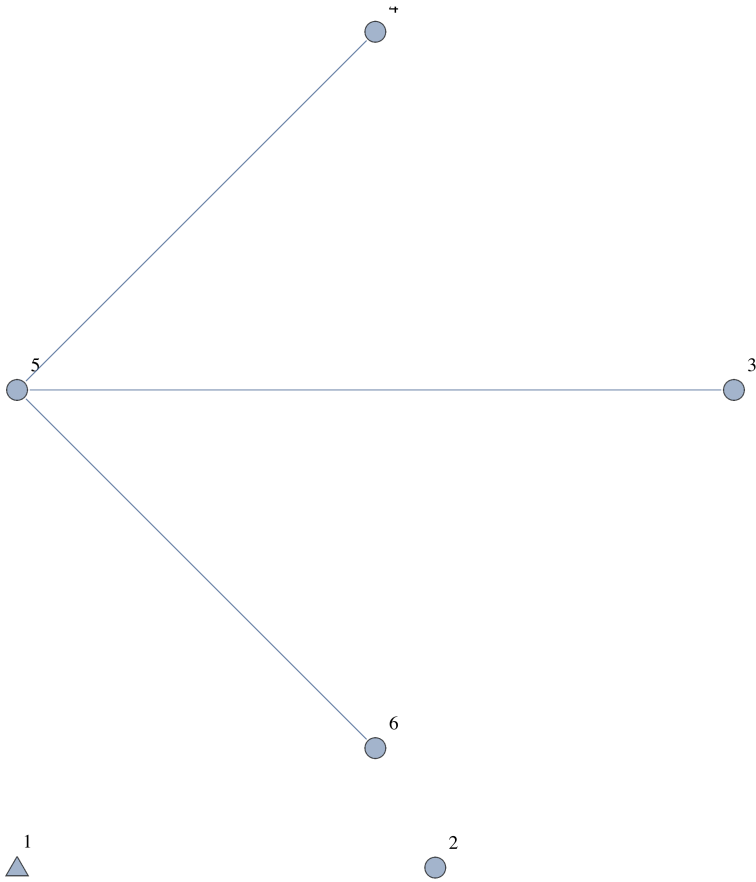
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 4 ↔ 5, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+0+\_5000\_6+)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 4 ↔ 5, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

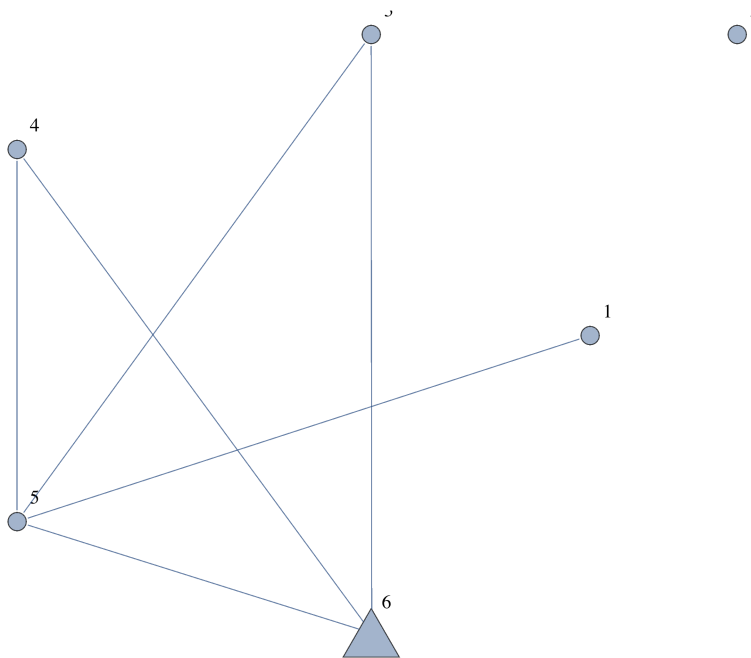


Player 2 lost!

■ **Player 1's Turn**

(+0+\_500+\_6)

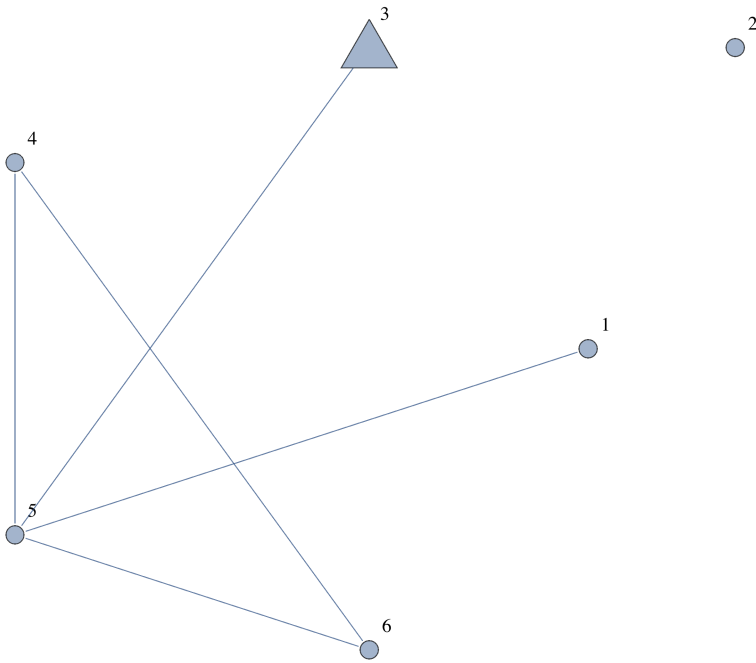
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+0+\_500+\_6)

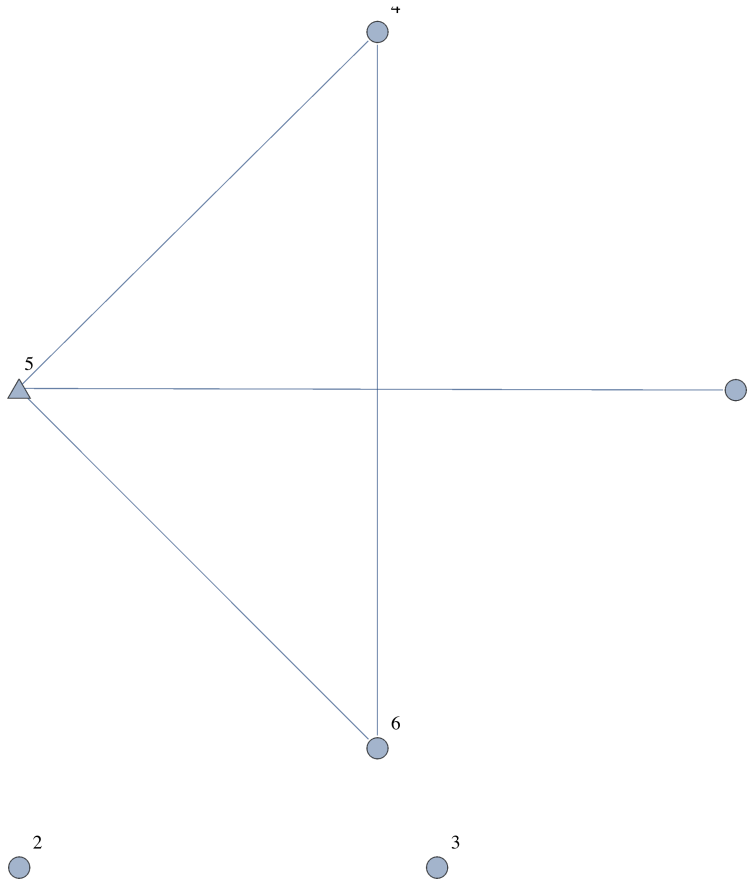
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(+0+\_500+\_60)

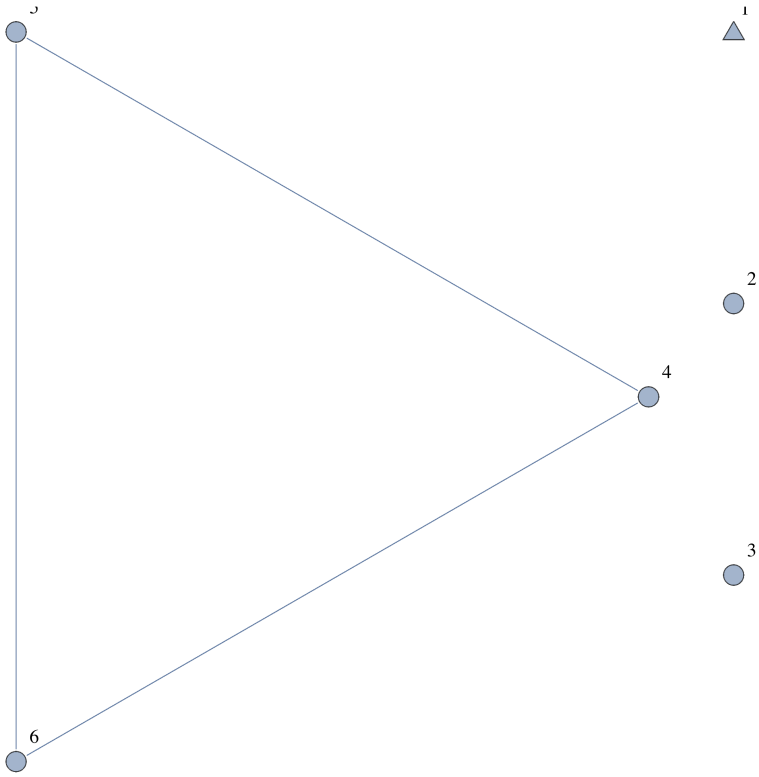
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



### ■ Player 2's Turn

(+0+\_500+\_60)

```
Graph[{1, 2, 3, 4, 5, 6}, {4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

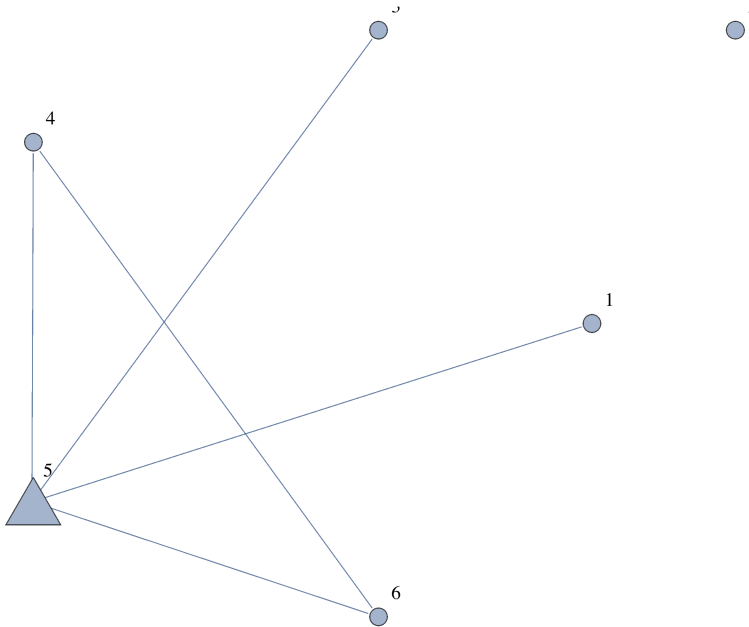


Player 2 lost!

■ Player 1's Turn

(+0+\_500+\_6+)

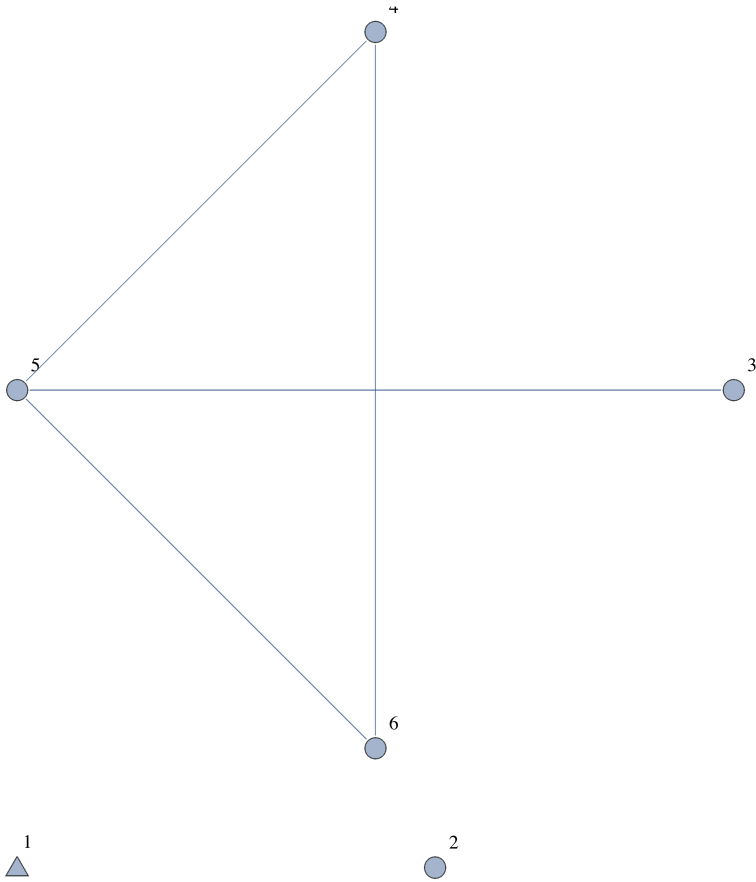
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+0+\_500+\_6+)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



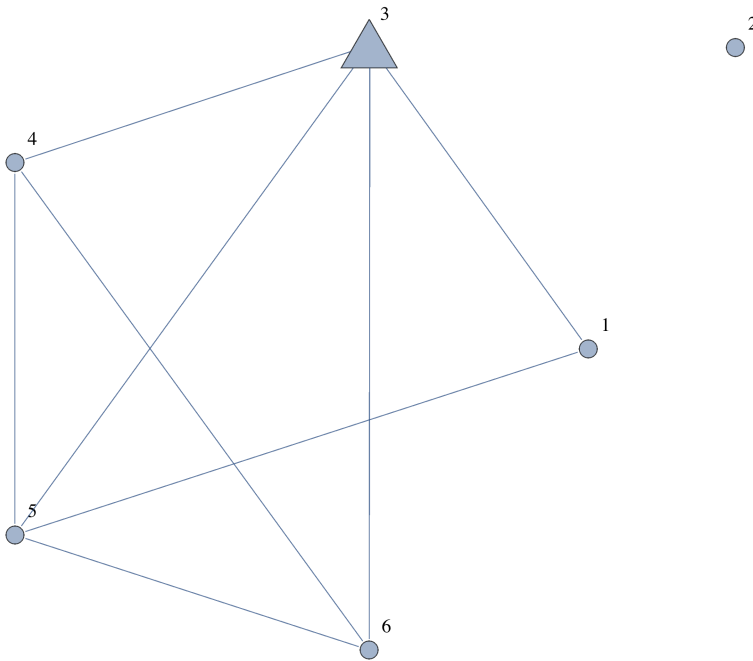
Player 2 lost!

■ Player 1's Turn

(+0+\_50+)



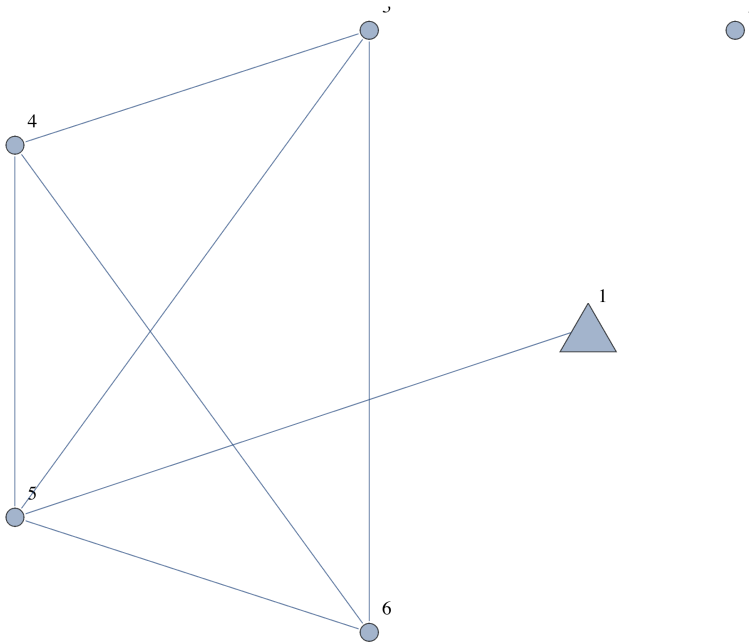
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+0+\_50+)

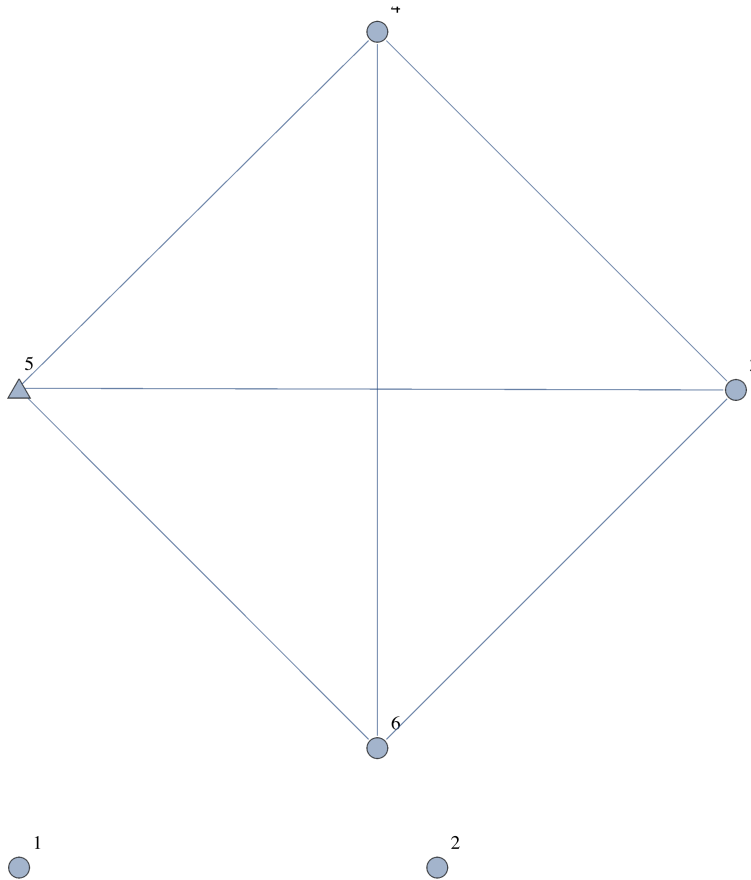
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(+0+\_50+0)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

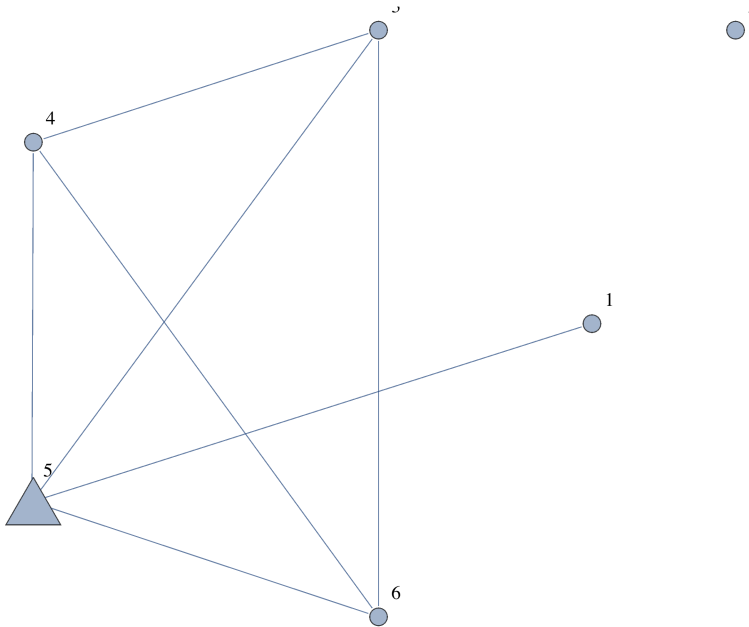


What remains is the  $K_4$ . Since the first player to play a  $K_4$  wins, Player 1 will win this game. Hence, Player 2 lost!

#### ■ Player 1's Turn

(+0+\_50++)

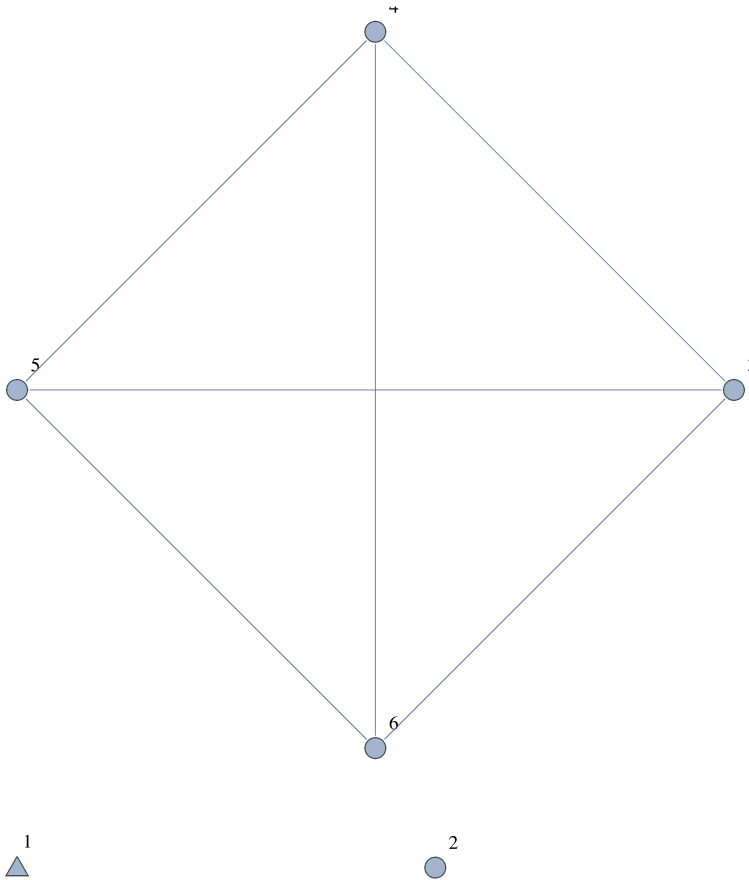
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 5, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+0+\_50++)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

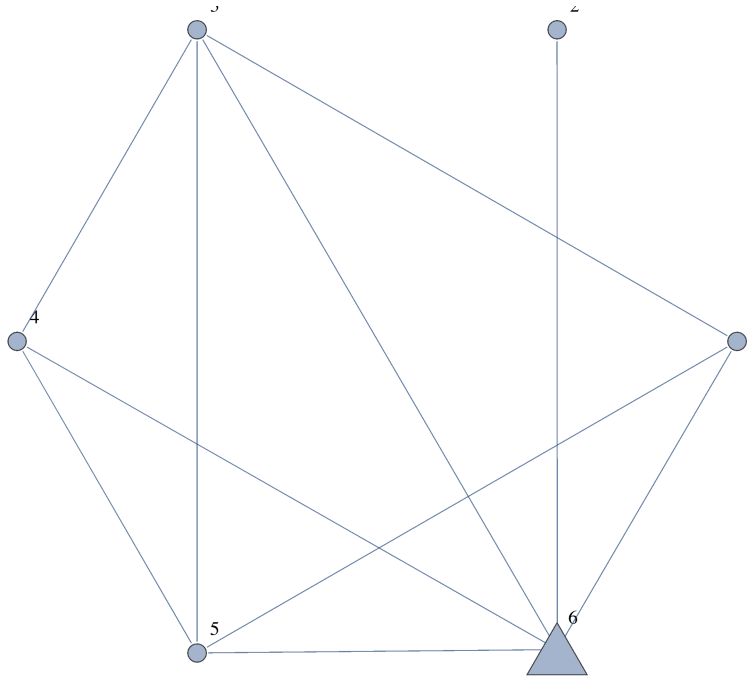


Player 2 lost!

■ **Player 1's Turn**

(+0+\_5+)

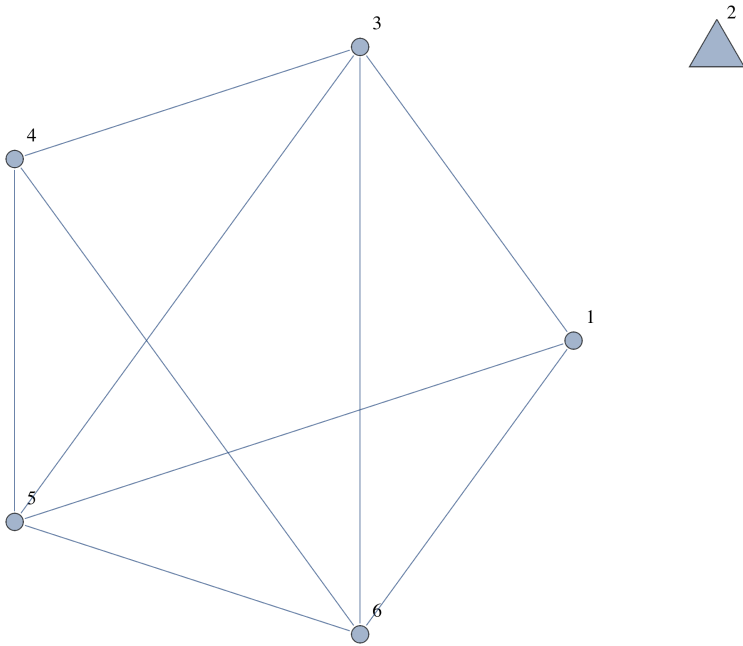
```
Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 5, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(+0+\_5+)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 5, 1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

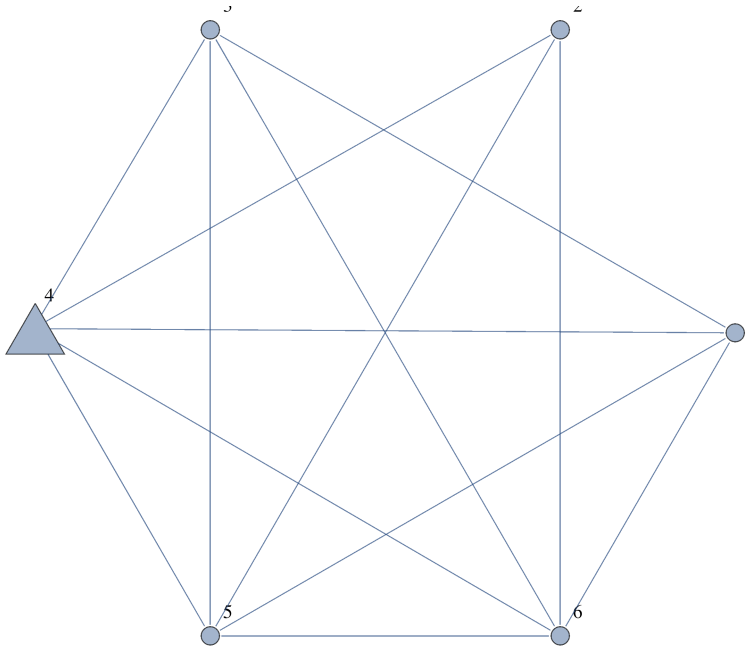


Player 2 lost!

■ Player 1's Turn

(++)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6,
  2 ↔ 4, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
  VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

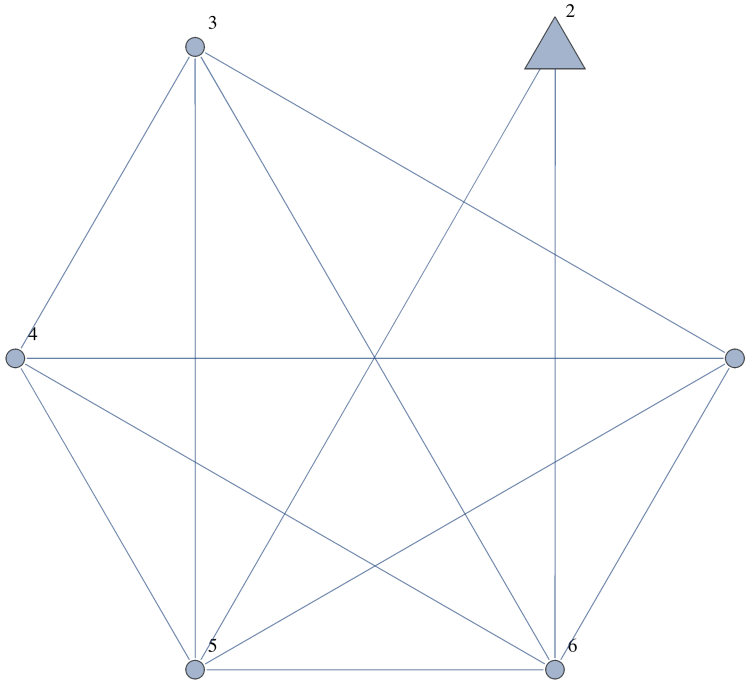


■ **Player 2's Turn**

(++)



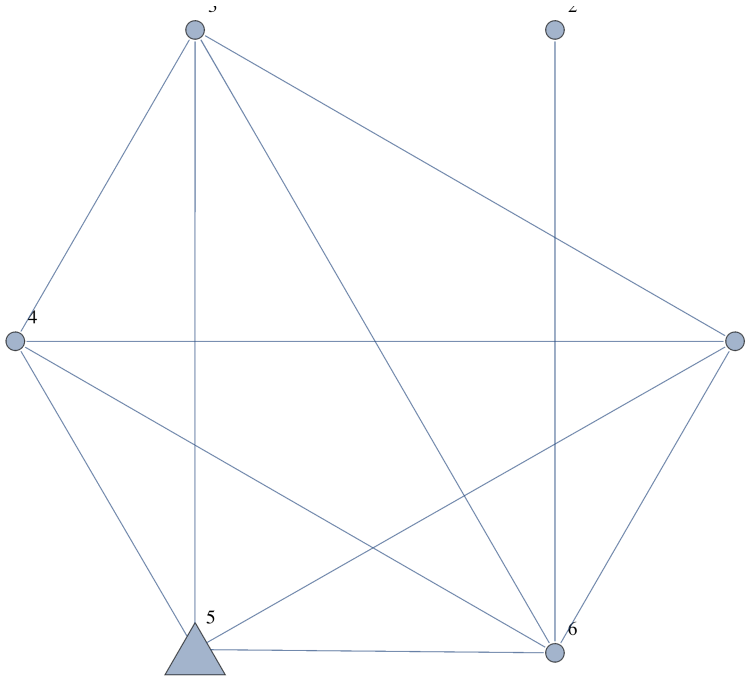
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 1's Turn

(++0)

```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



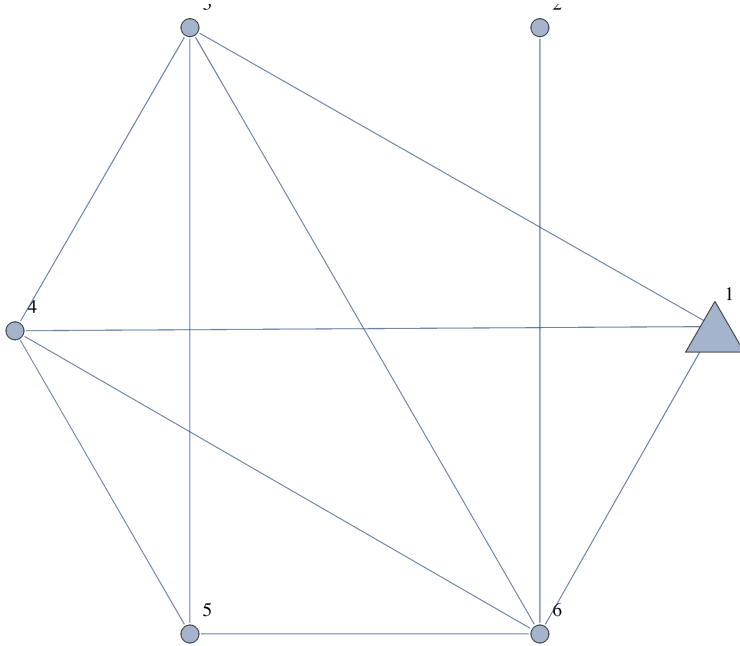
### ■ Player 2's Turn

(++0)

```

Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]

```

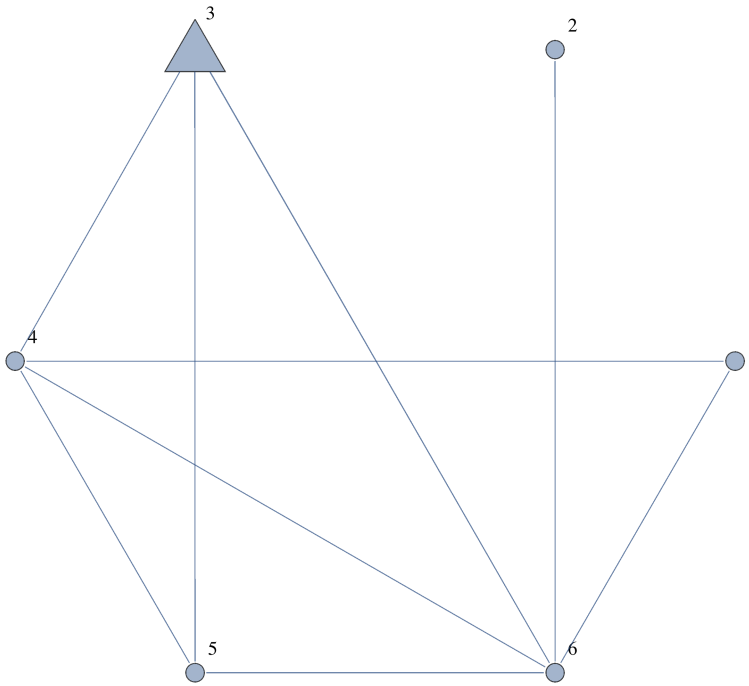


Player 2 has two nonisomorphic options, to  $v_3$  or  $v_6$ .

#### ■ Player 1's Turn

(++00\_3)

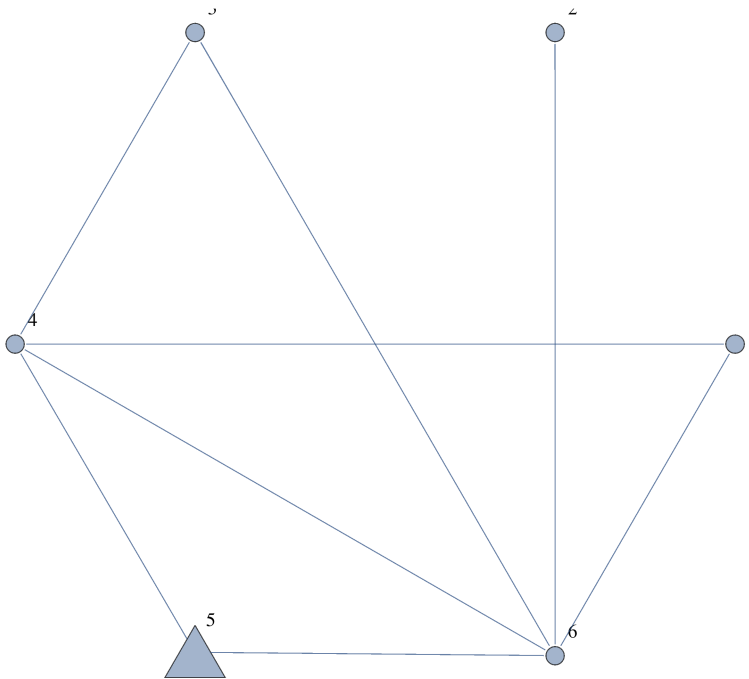
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++00\_3)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

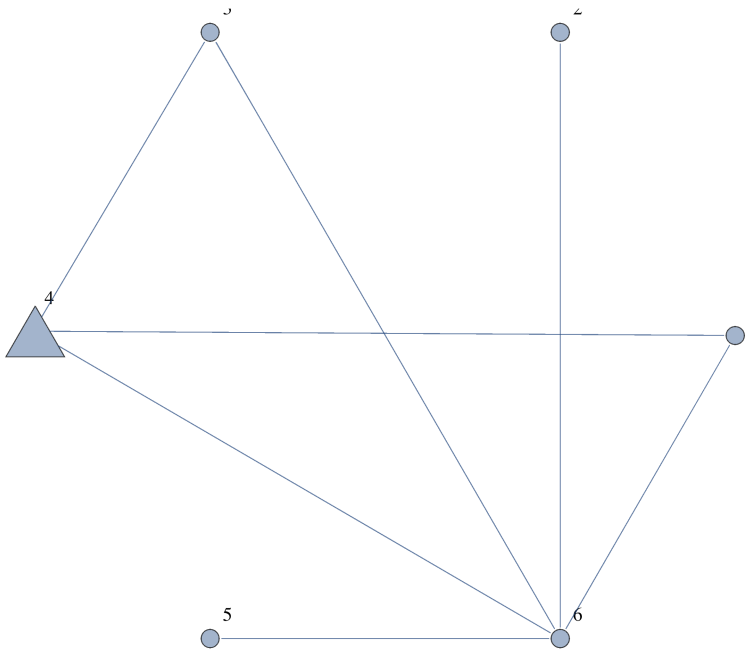


Player 2 has two nonisomorphic options, to  $v_4$  or  $v_6$ .

#### ■ Player 1's Turn

(++00\_30\_4)

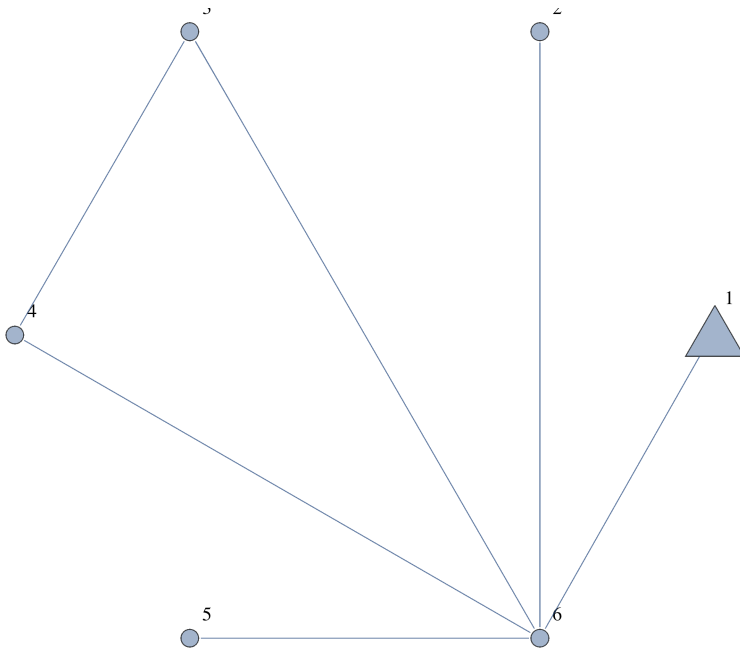
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 4, 1 -> 6, 2 -> 6, 3 -> 4, 3 -> 6, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++00\_30\_4)

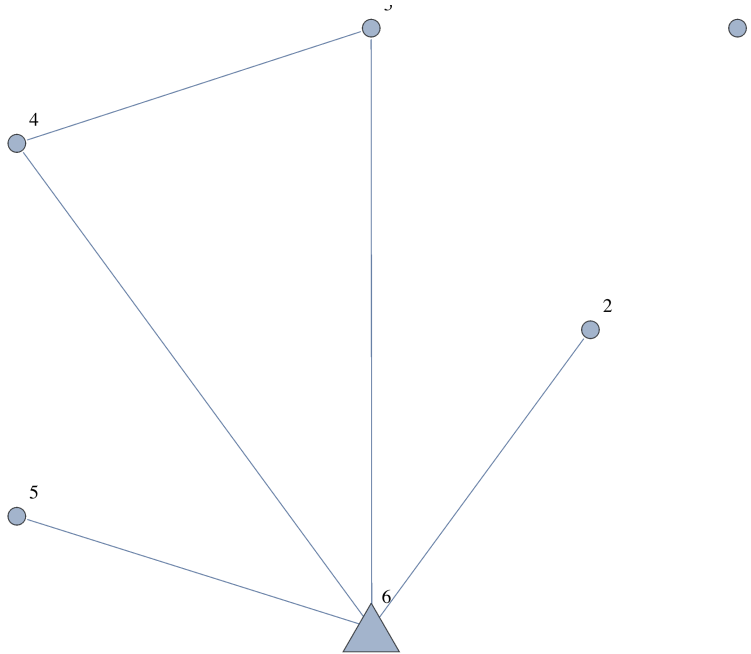
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 6, 2 -> 6, 3 -> 4, 3 -> 6, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



**■ Player 1's Turn**

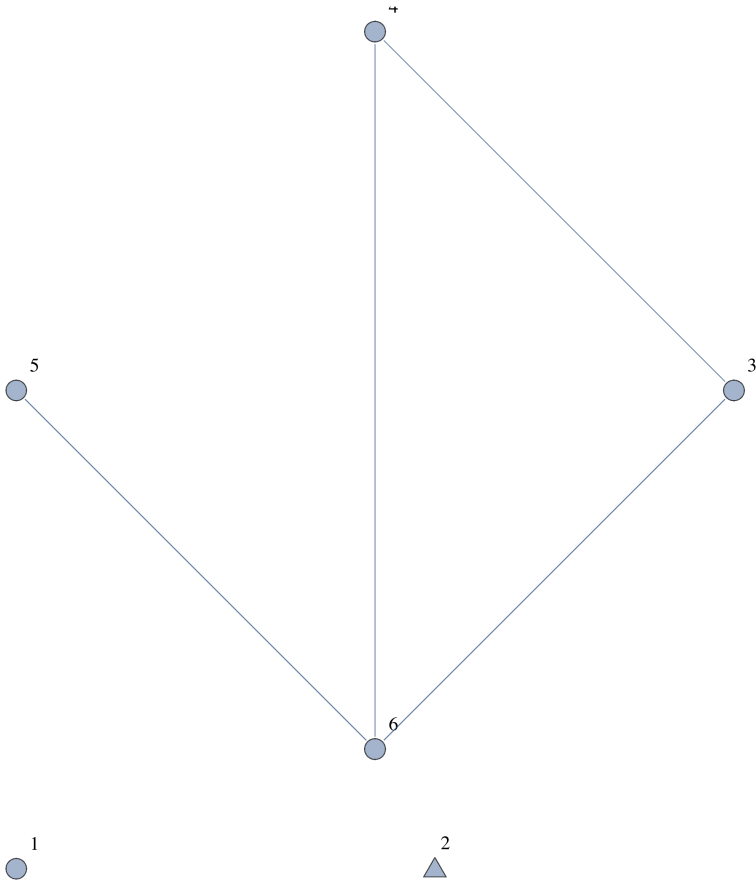
(++00\_30\_40)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

**■ Player 1's Turn**

(++00\_30\_40)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



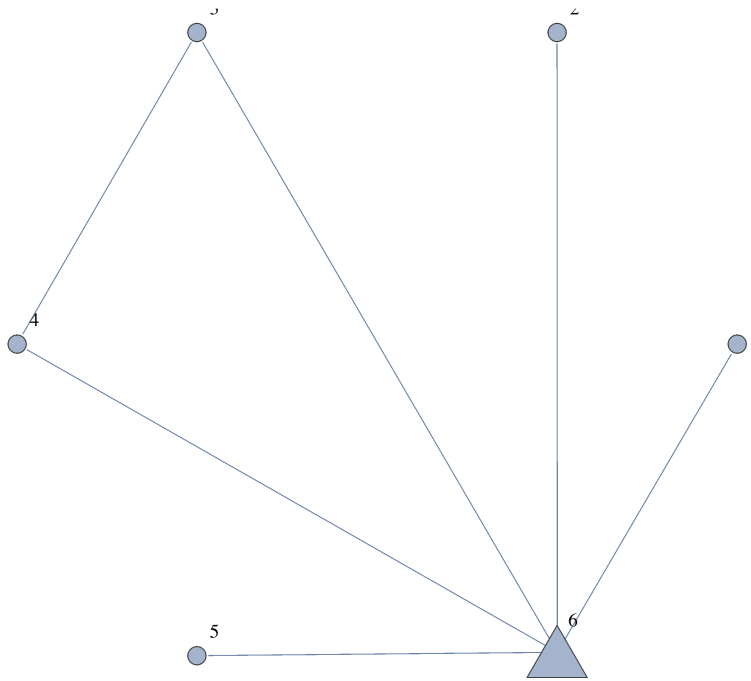
Player 2 lost!

■ Player 1's Turn

(++00\_30\_4+)



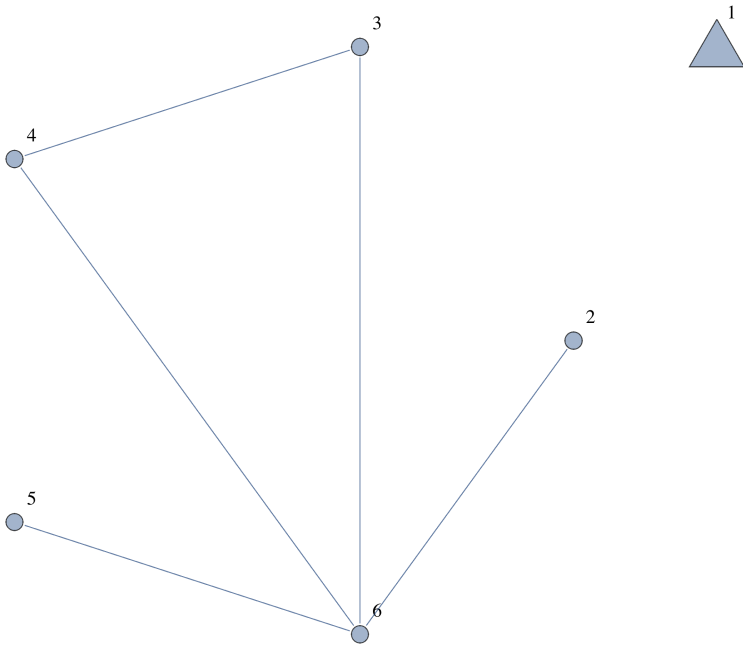
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(++00\_30\_4+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

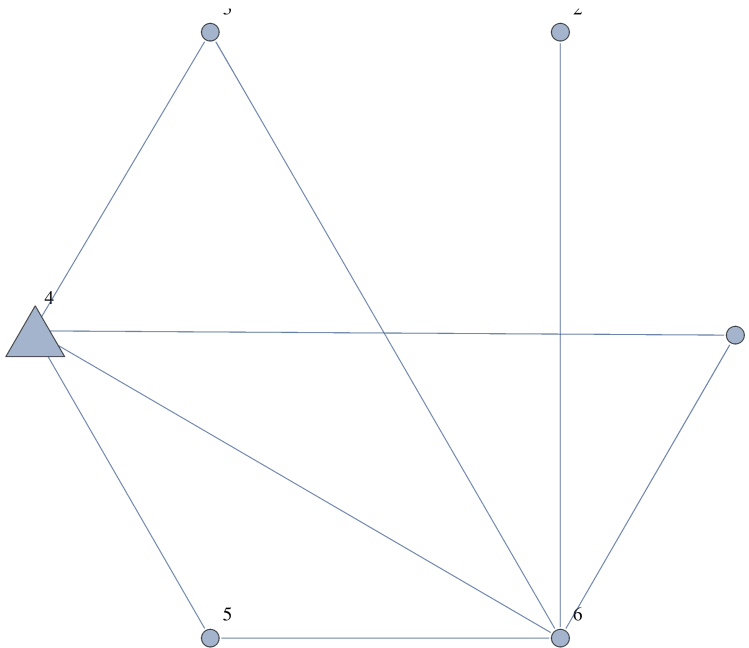


Player 2 lost!

■ Player 1's Turn

(++00\_3+\_4)

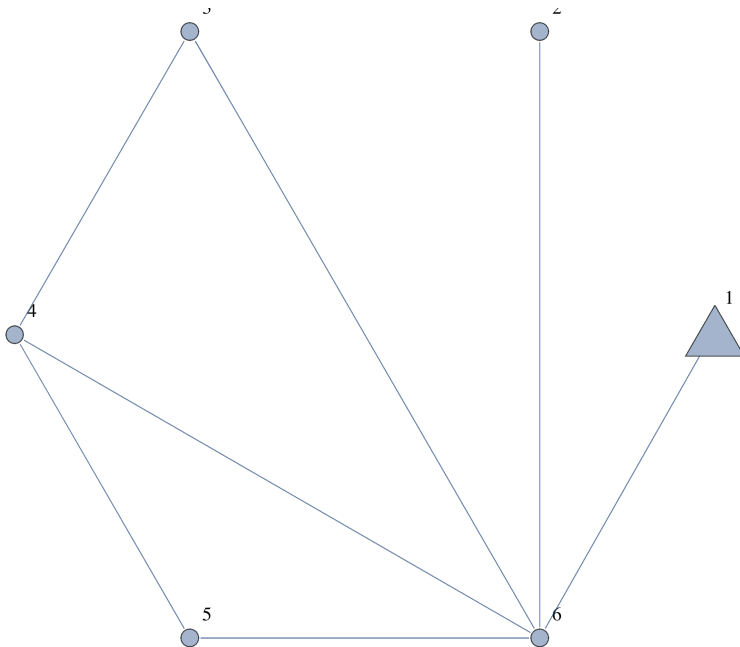
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(++00\_3+\_4)

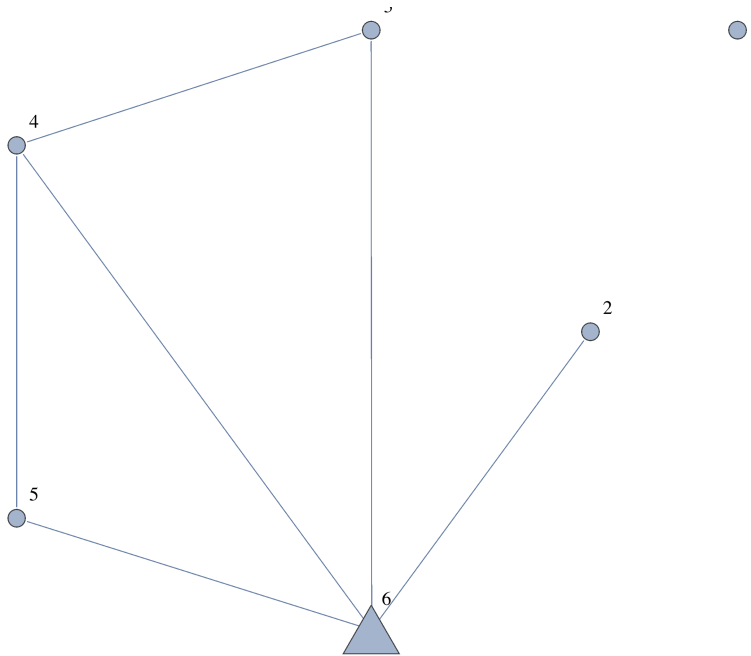
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 1's Turn**

(++00\_3+\_40)

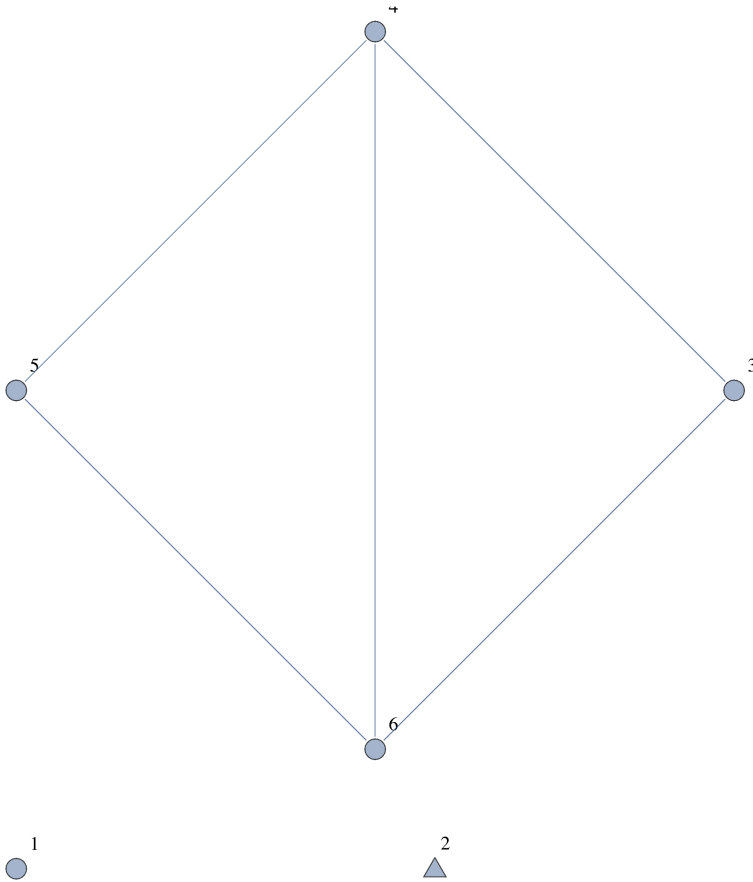
```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(++00\_3+\_40)

```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

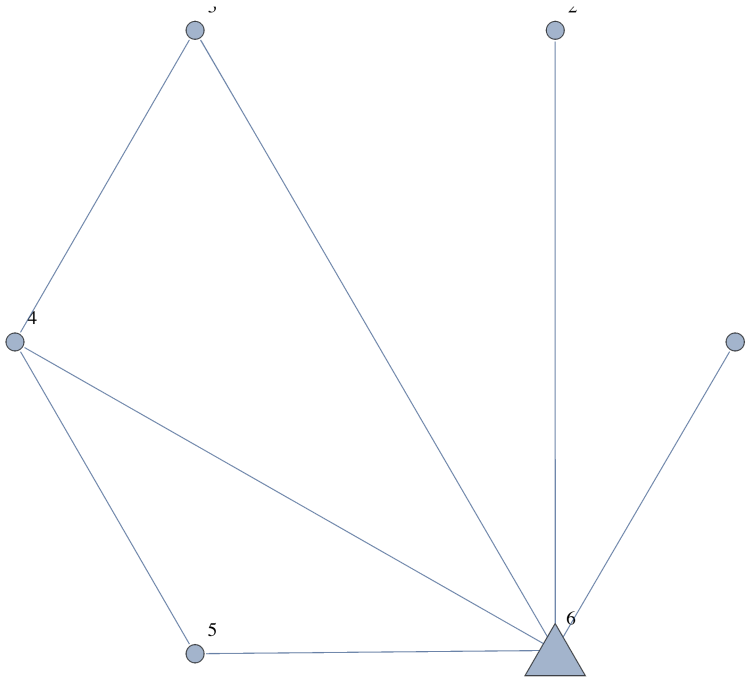


Player 2 lost!

■ **Player 1's Turn**

(++00\_3+\_4+)

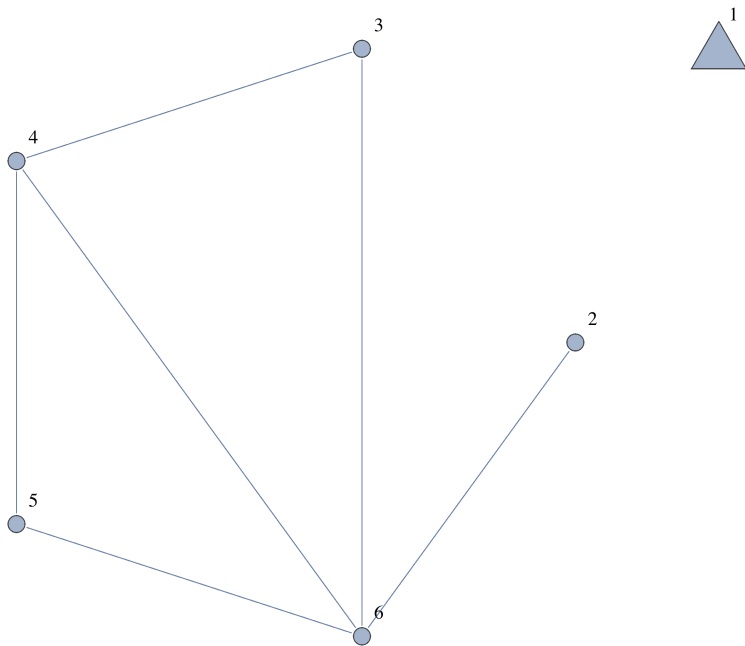
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++00\_3+\_4+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

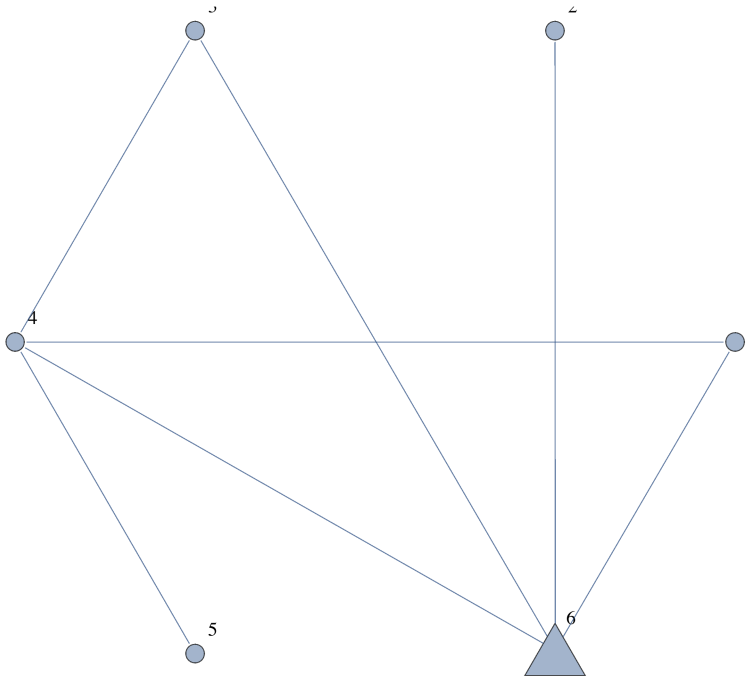


Player 2 lost!

■ Player 1's Turn

(++00\_30\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

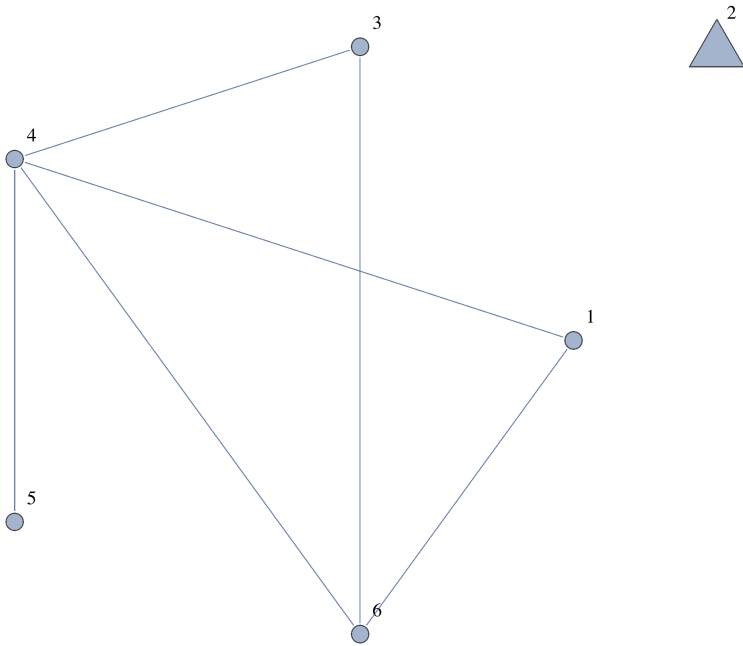


■ Player 2's Turn

(++00\_30\_6)



```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

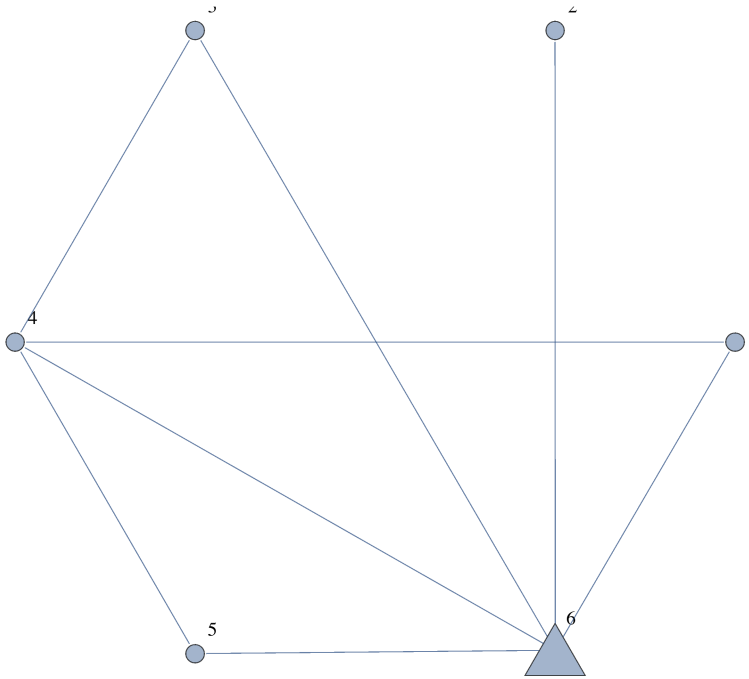


Player 2 lost!

■ Player 1's Turn

(++00\_3+\_6)

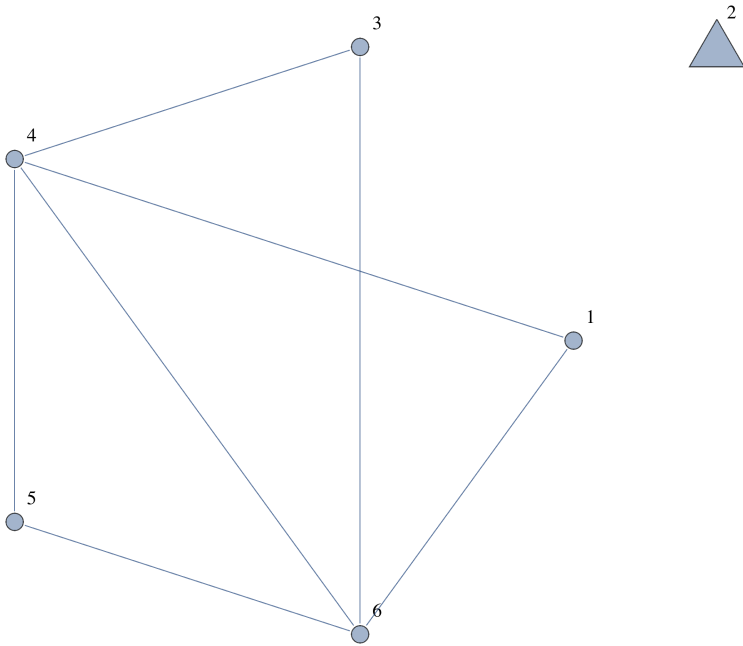
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++00\_3+\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 3 ↔ 4, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

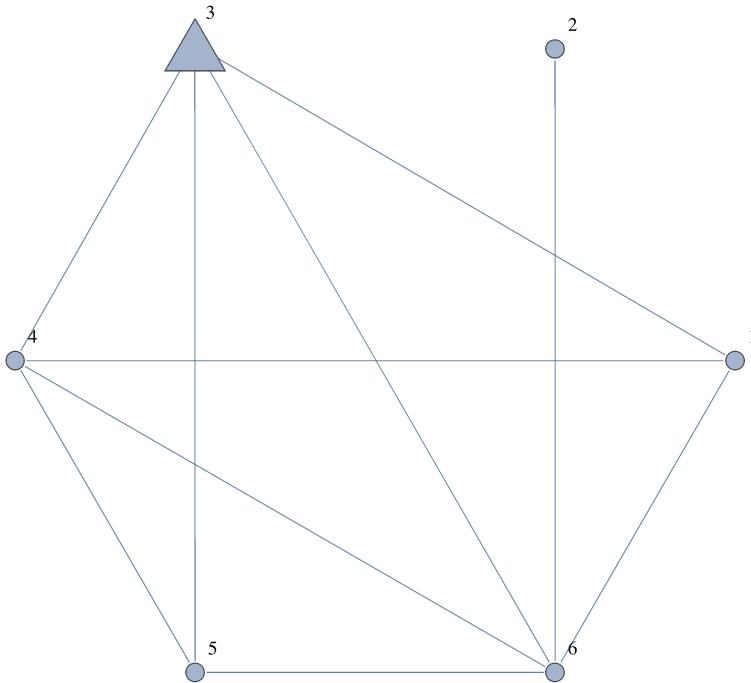


Player 2 lost!

■ **Player 1's Turn**

(++0+\_3)

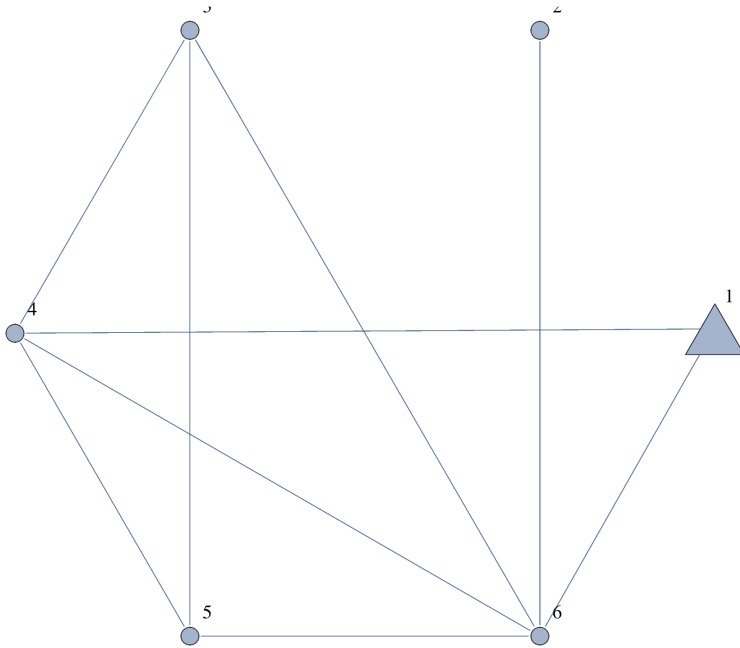
```
Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},
  VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++0+\_3)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

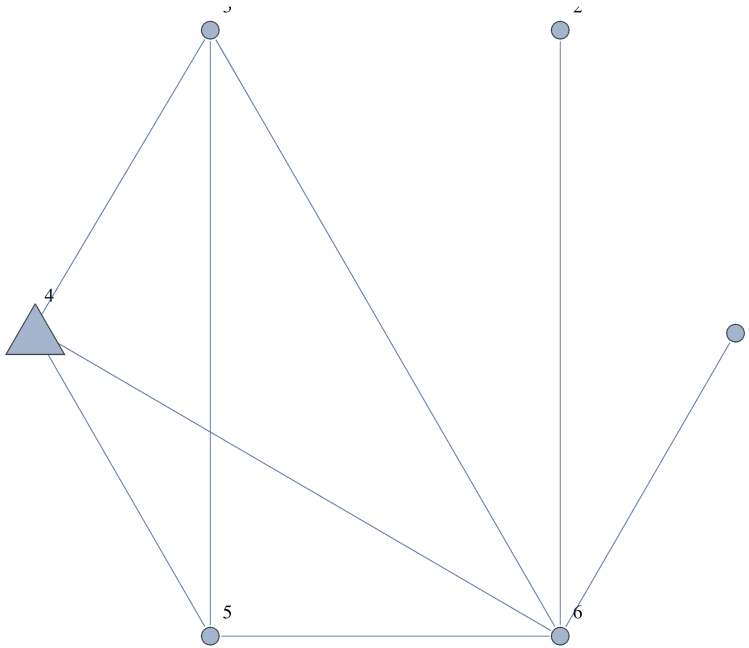


Player 2 has two nonisomorphic options, to  $v_4$  and  $v_6$ .

#### ■ Player 1's Turn

(++0+\_30\_4)

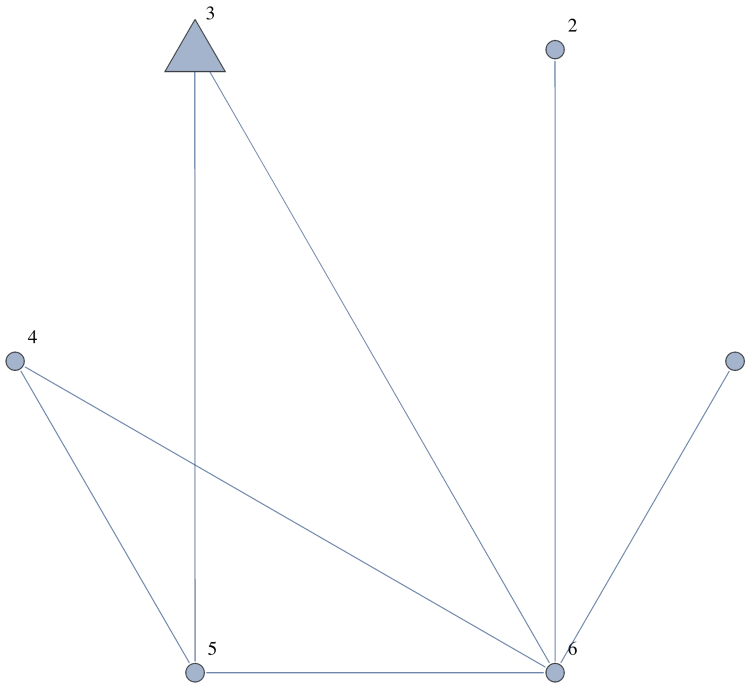
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},  
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++0+\_30\_4)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

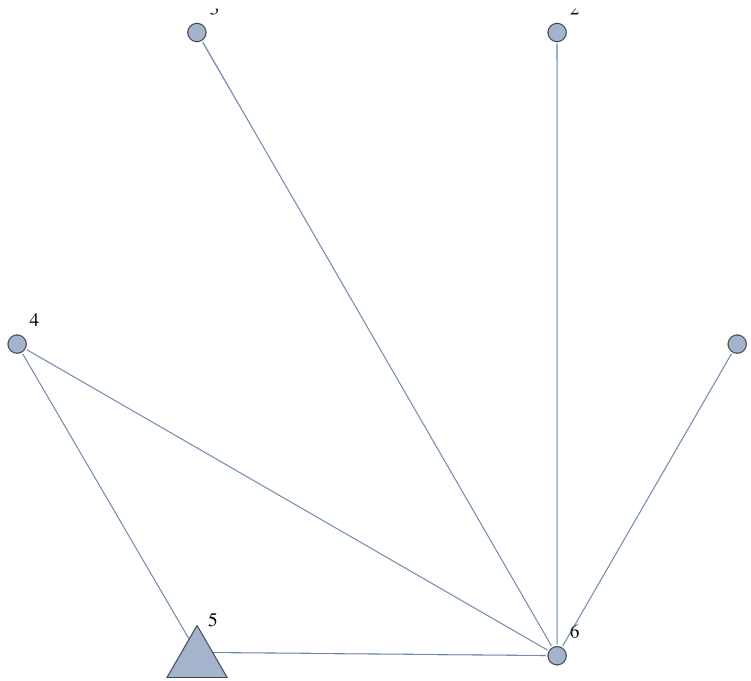


Player 2 has two nonisomorphic options, to  $v_5$  or  $v_6$ .

#### ■ Player 1's Turn

(++0+\_30\_40\_5)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

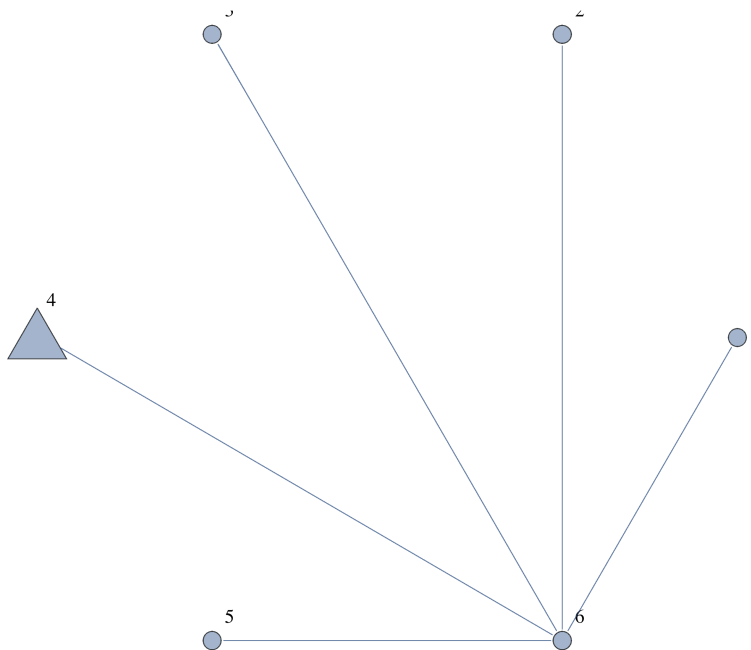


■ Player 2's Turn

(++0+\_30\_40\_5)



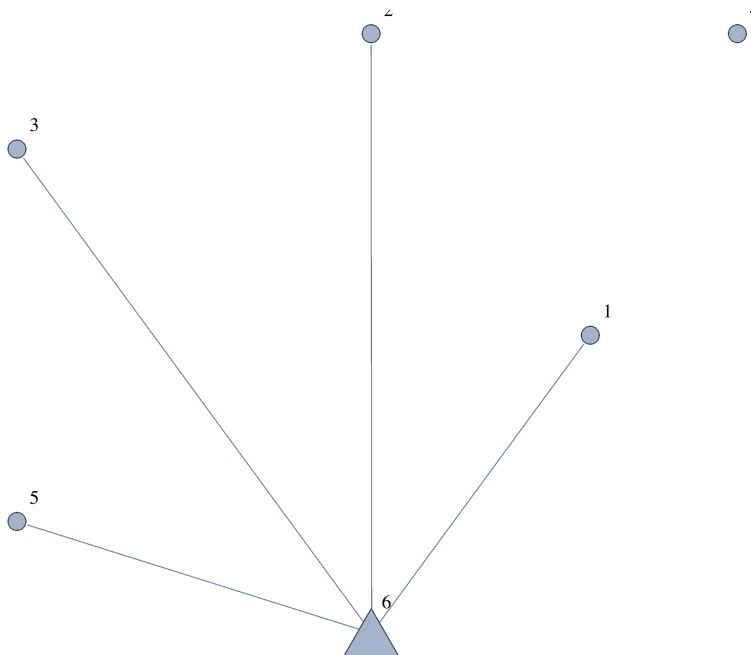
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 6, 2 -> 6, 3 -> 6, 4 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 1's Turn

(++0+\_30\_40\_50)

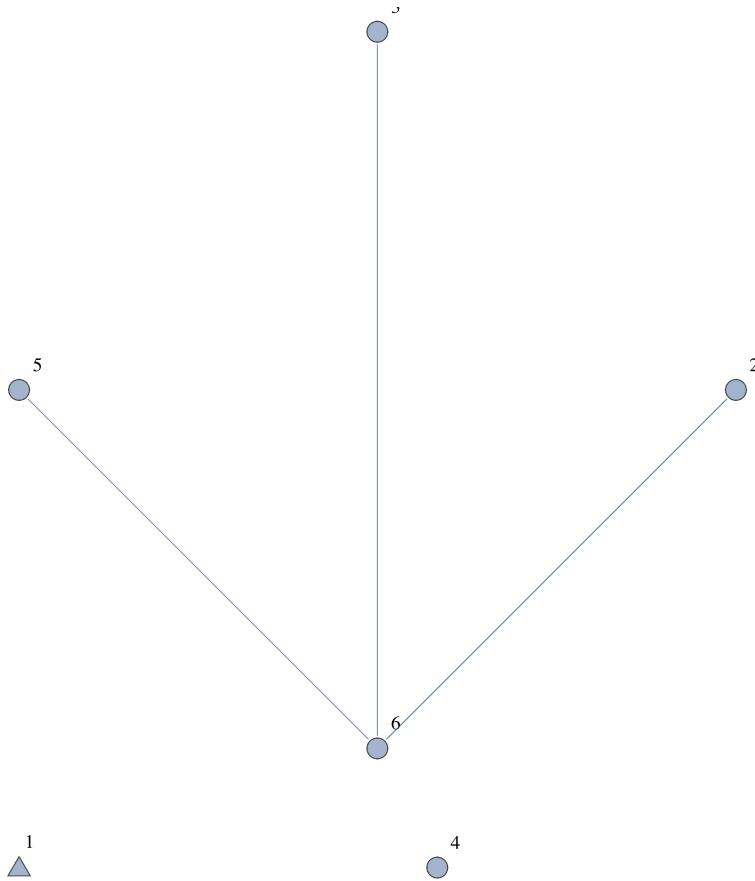
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 6, 2 -> 6, 3 -> 6, 5 -> 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 2's Turn**

(++0+\_30\_40\_50)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ← 6, 3 ← 6, 5 ← 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

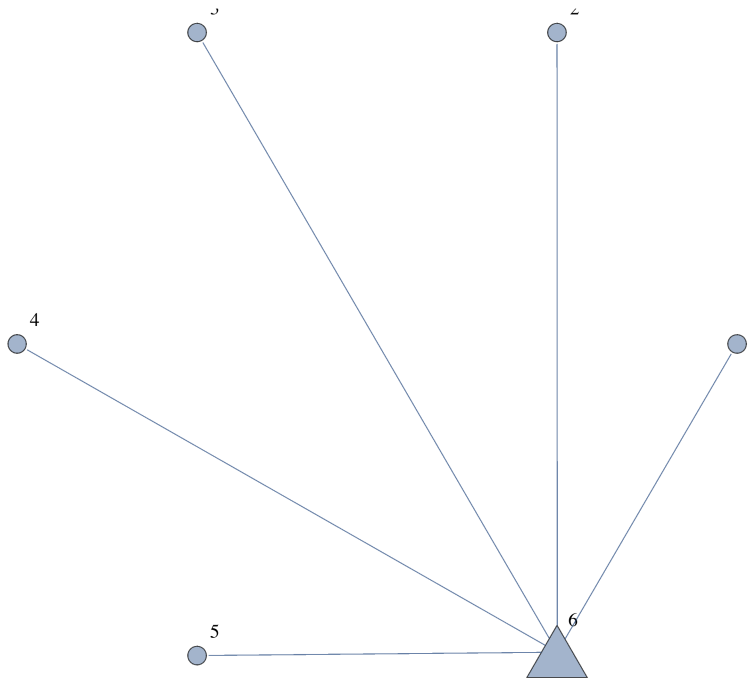


Player 2 lost!

■ **Player 1's Turn**

(++0+\_30\_40\_5+)

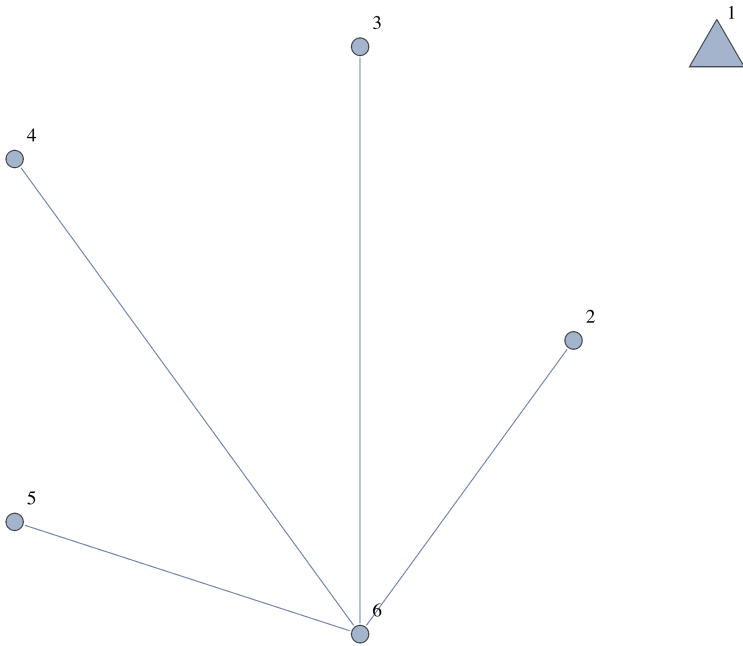
```
Graph[{1, 2, 3, 4, 5, 6}, {1 -> 6, 2 -> 6, 3 -> 6, 4 -> 6, 5 -> 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(++0+\_30\_40\_5+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 6, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

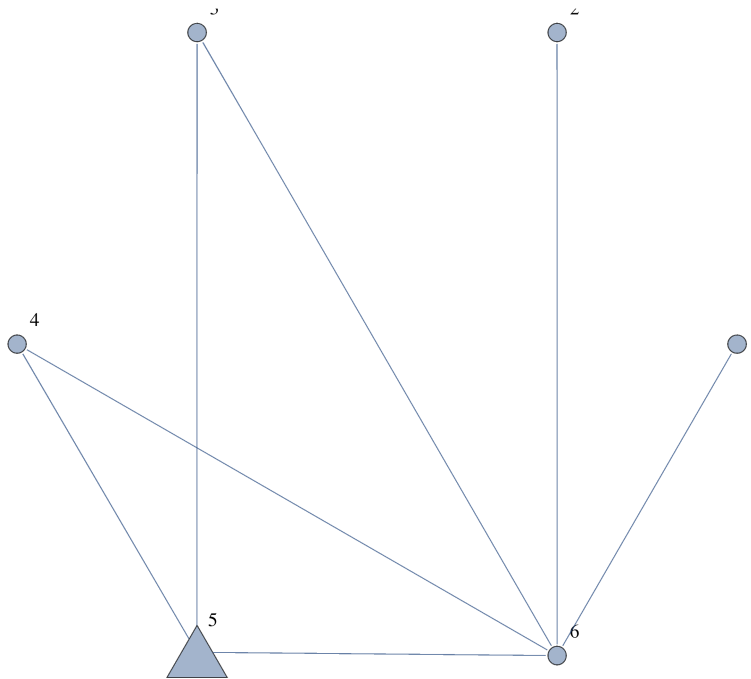


Player 2 lost!

■ Player 1's Turn

(++0+\_30\_4+\_5)

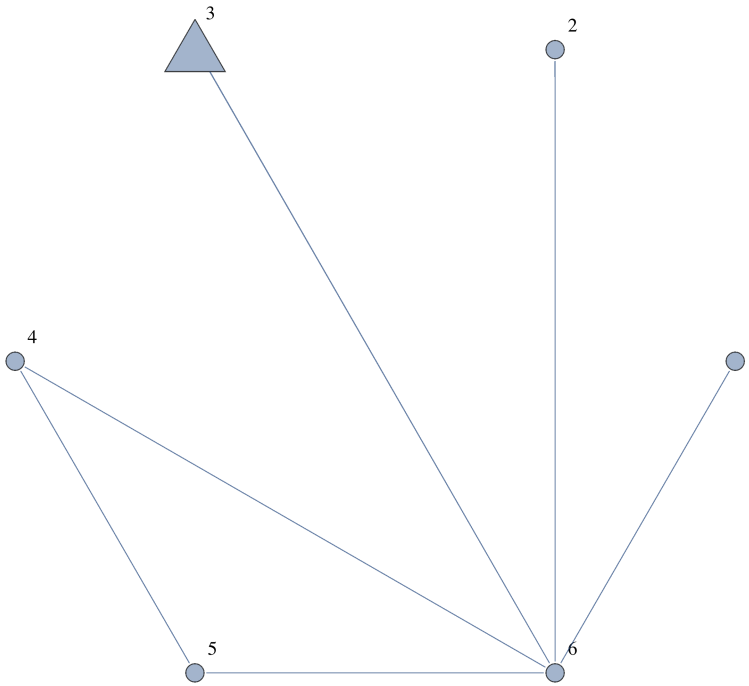
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},
VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++0+\_30\_4+\_5)

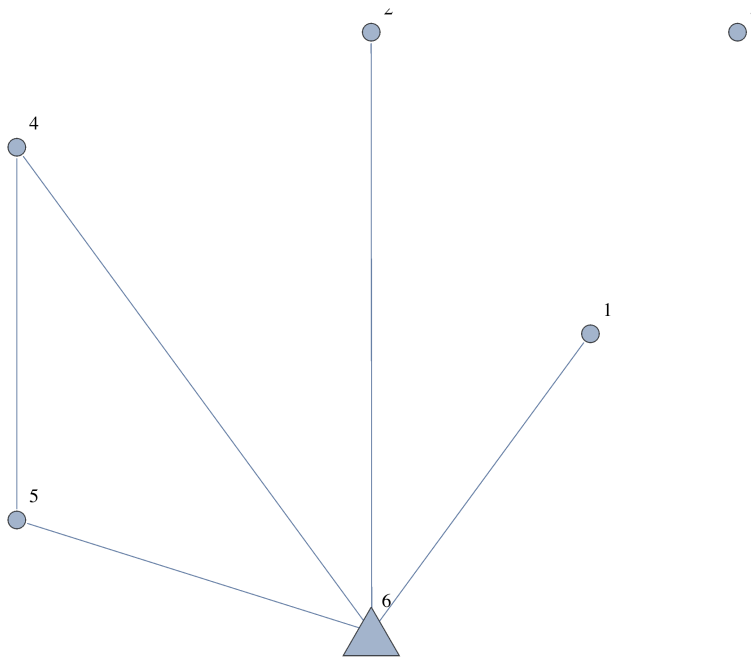
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {3 -> "Triangle"},  
VertexSize -> {3 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 1's Turn

(++0+\_30\_4+\_50)

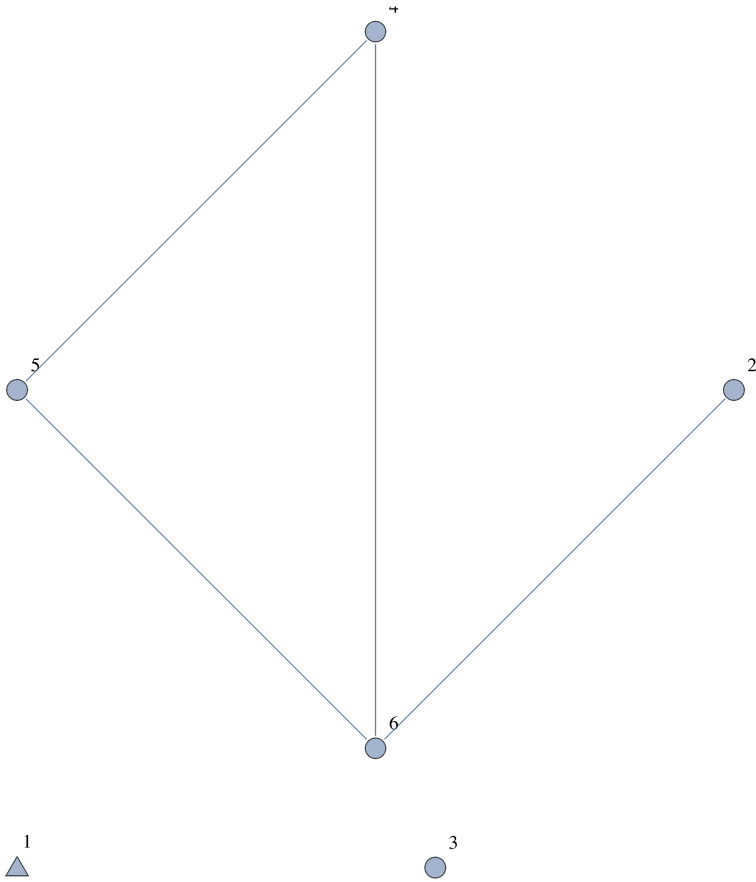
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(++0+\_30\_4+\_50)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
  VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



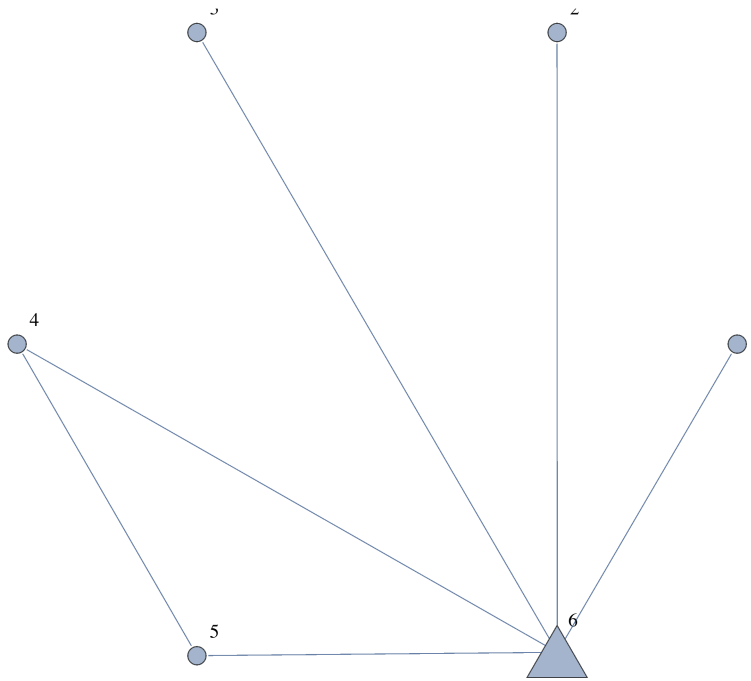
Player 2 lost!

■ Player 1's Turn

(++0+\_30\_4+\_5+)



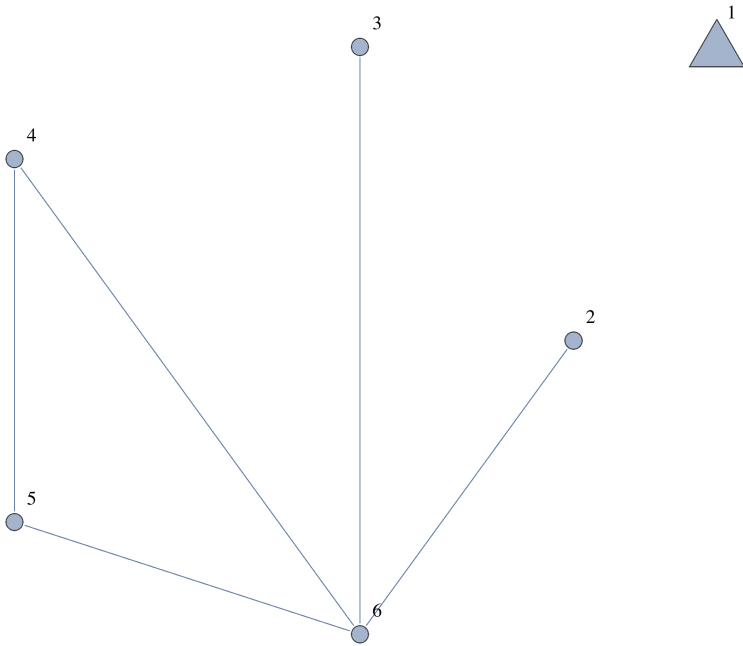
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(++0+\_30\_4+\_5+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

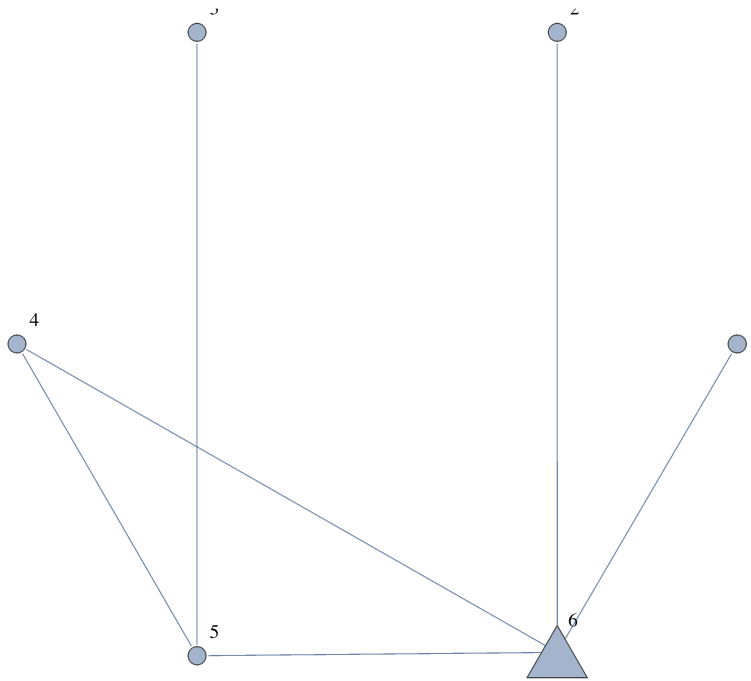


Player 2 lost!

■ Player 1's Turn

(++0+\_30\_40\_6)

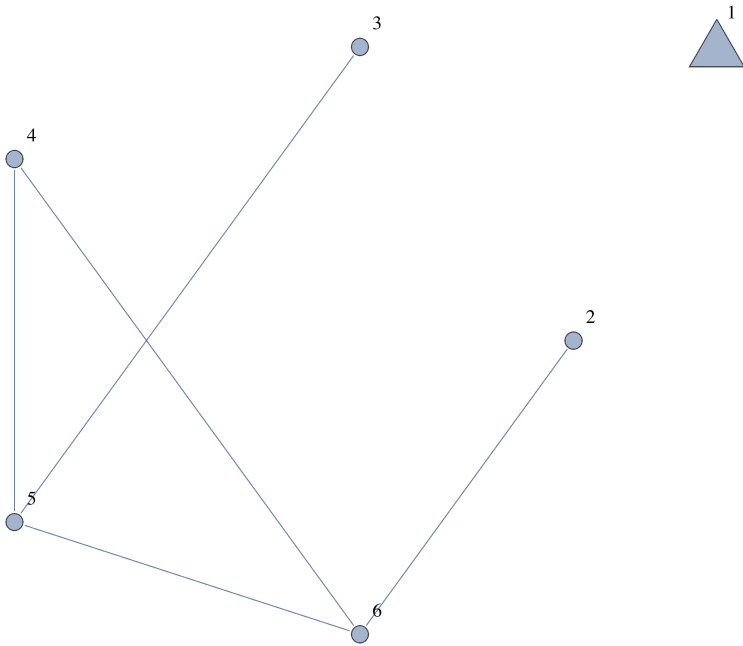
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(++0+\_30\_40\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 5, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

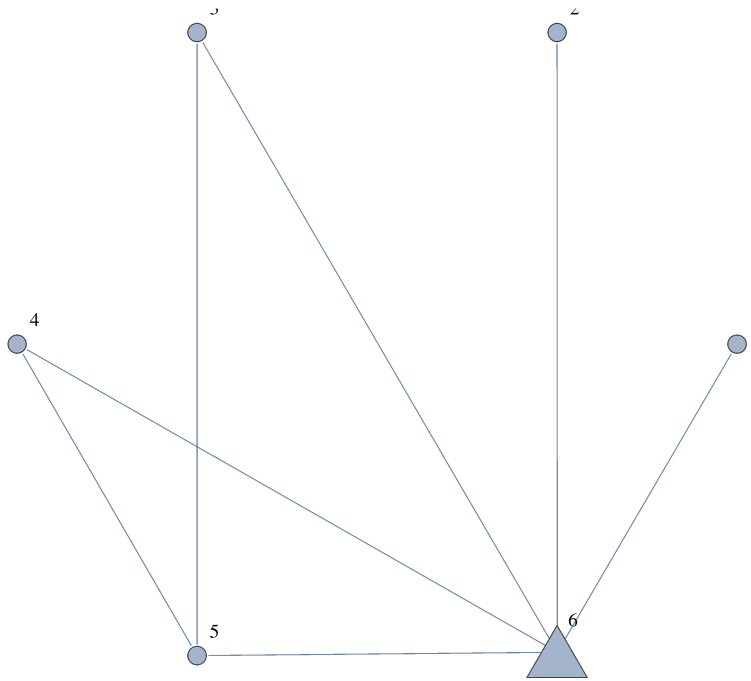


Player 2 lost!

■ Player 1's Turn

(++0+\_30\_4+\_6)

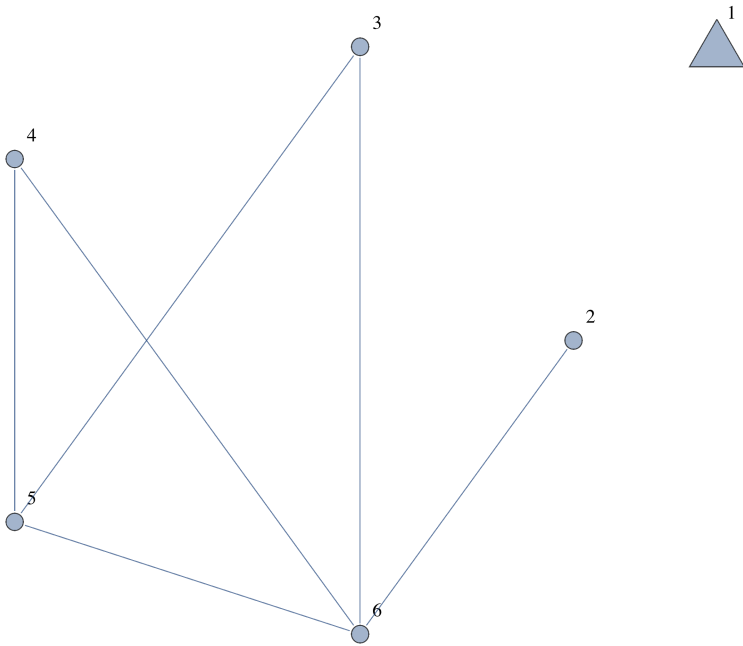
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(++0+\_30\_4+\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},  
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

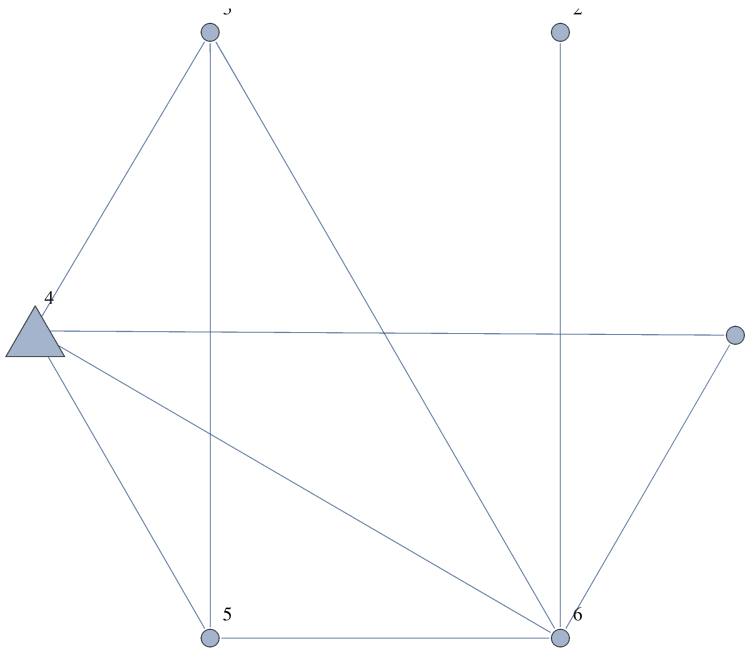


Player 2 lost!

■ Player 1's Turn

(++0+\_3+\_4)

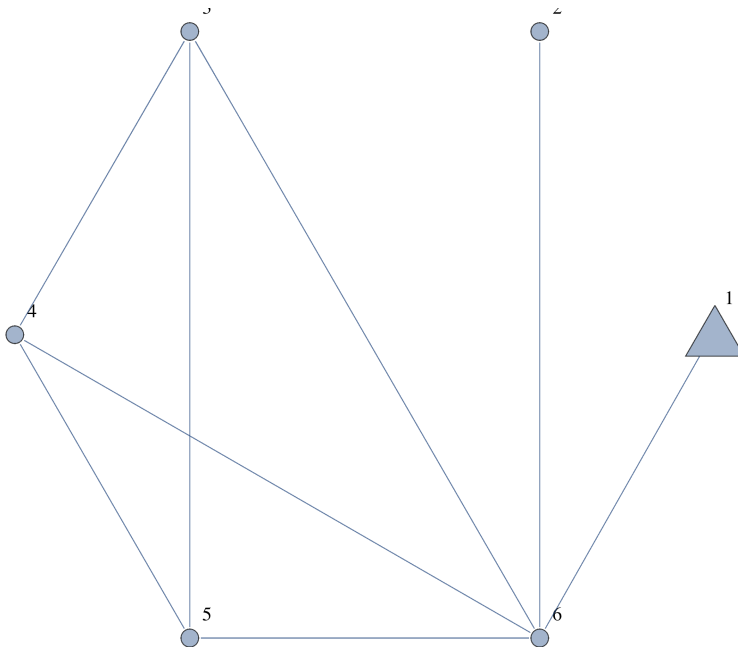
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {4 -> "Triangle"},
VertexSize -> {4 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(++0+\_3+\_4)

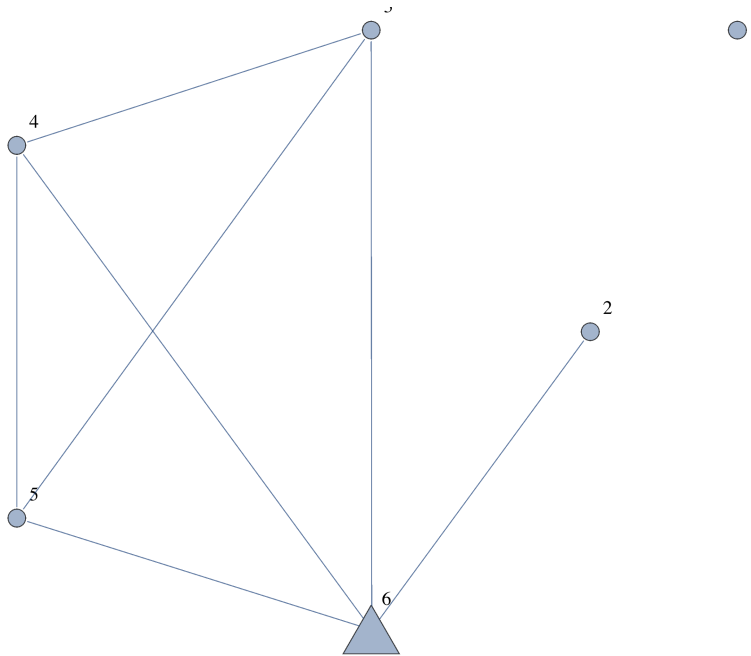
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ **Player 1's Turn**

(++0+\_3+\_40)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 -> 6, 3 -> 4, 3 -> 5, 3 -> 6, 4 -> 5, 4 -> 6, 5 -> 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

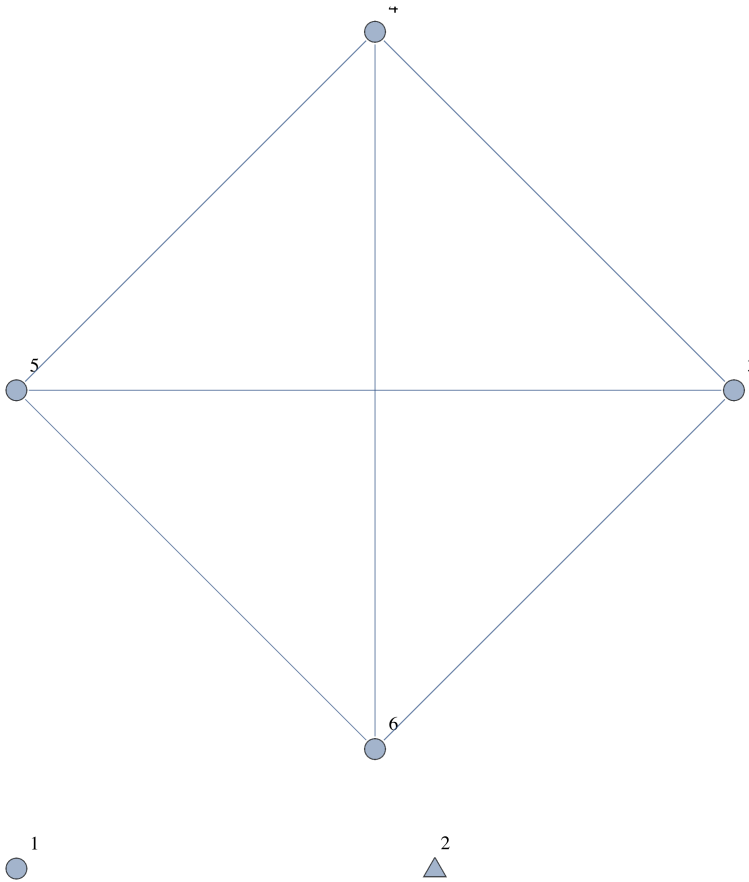


■ **Player 2's Turn**

(++0+\_3+\_40)



```
Graph[{1, 2, 3, 4, 5, 6}, {3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

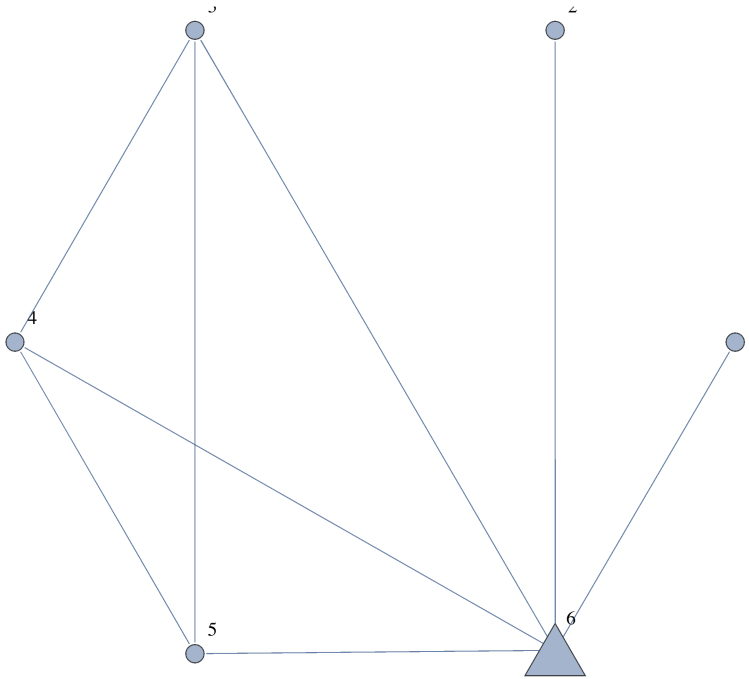


Player 2 lost!

■ **Player 1's Turn**

(++0+\_3+\_4+)

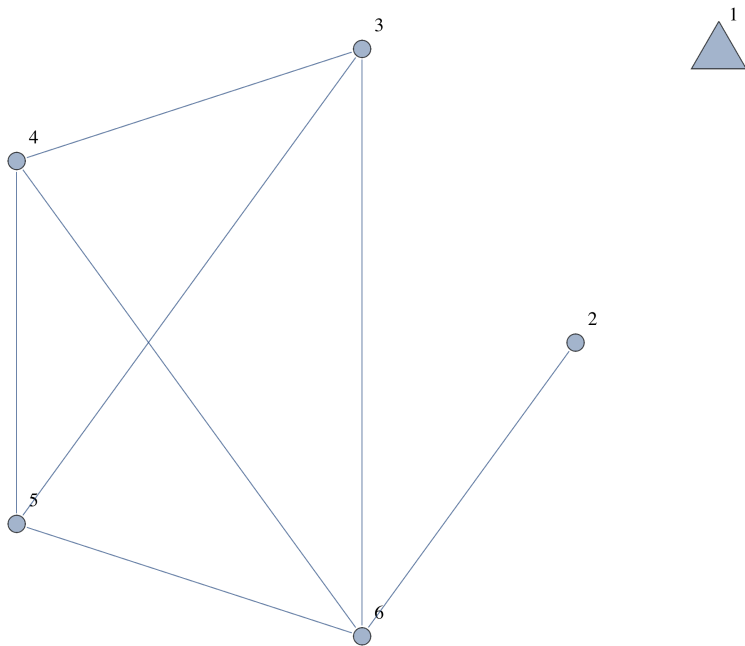
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++0+\_3+\_4+)

```
Graph[{1, 2, 3, 4, 5, 6}, {2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {1 -> "Triangle"},
VertexSize -> {1 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

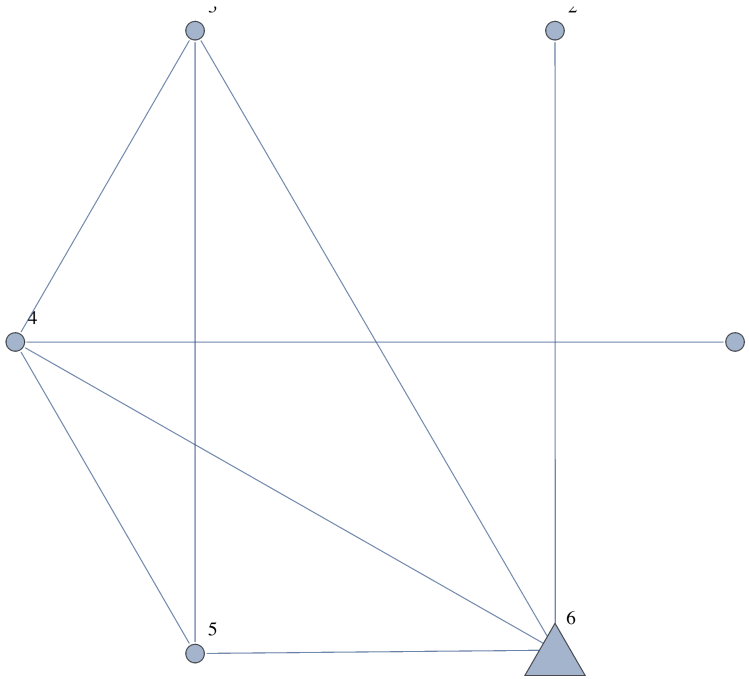


Player 2 lost!

■ **Player 1's Turn**

(++0+\_30\_6)

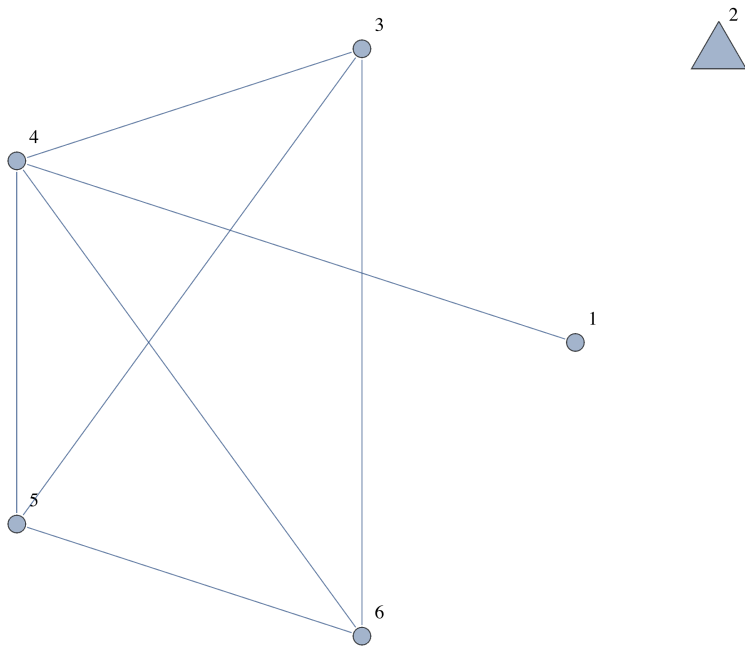
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++0+\_30\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

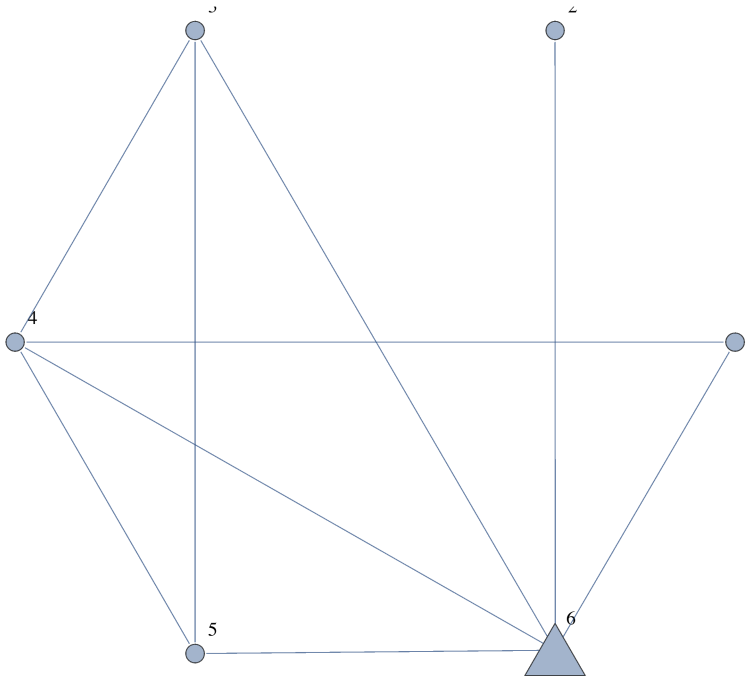


Player 2 lost!

■ **Player 1's Turn**

(++0+\_3+\_6)

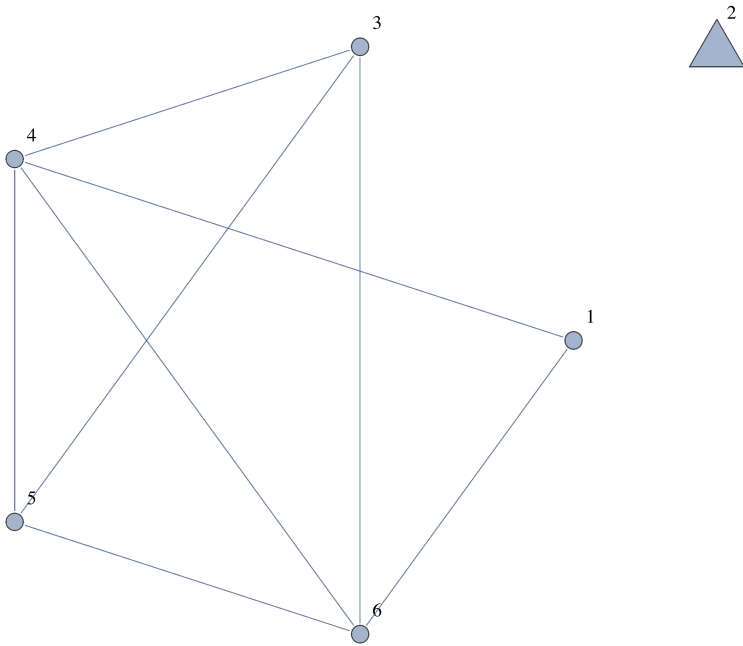
```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++0+\_3+\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 4, 1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

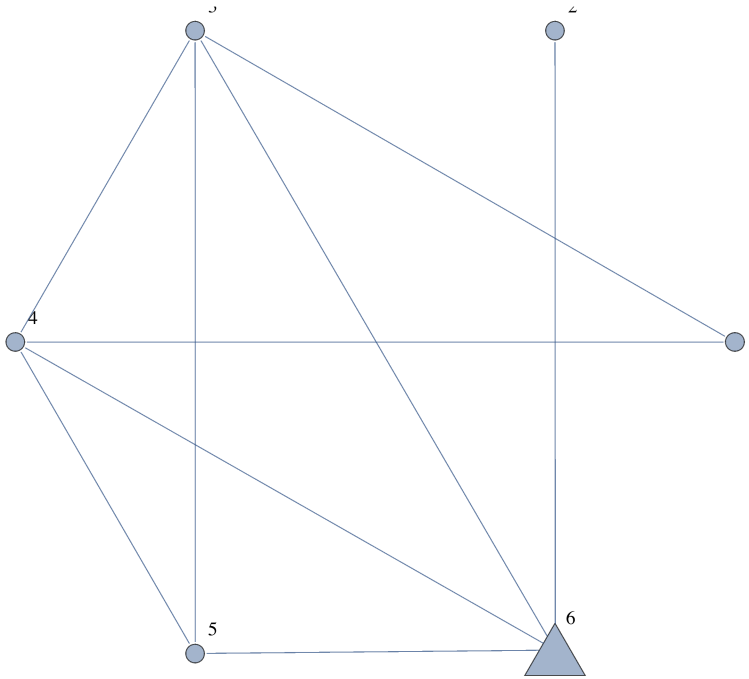


Player 2 lost!

■ **Player 1's Turn**

(++00\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 4, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},  
VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

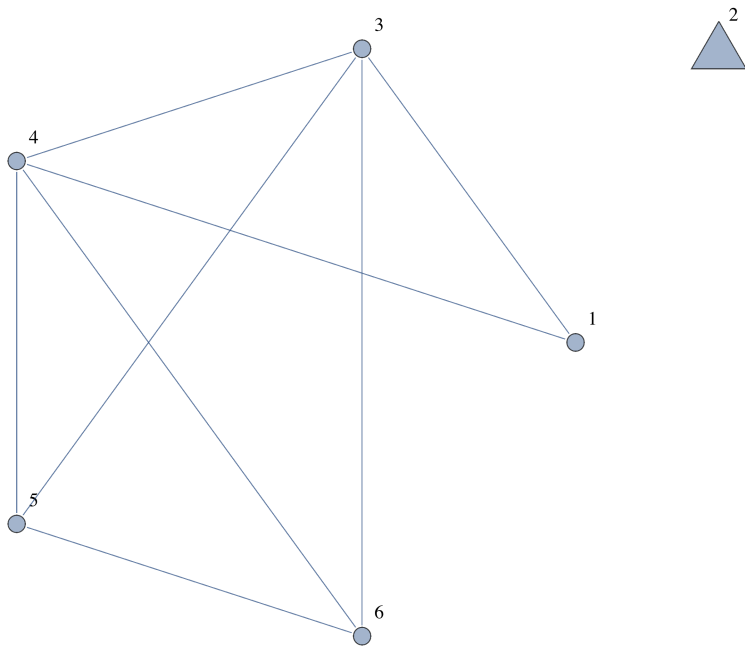


■ Player 2's Turn

(++00\_6)



```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 4, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

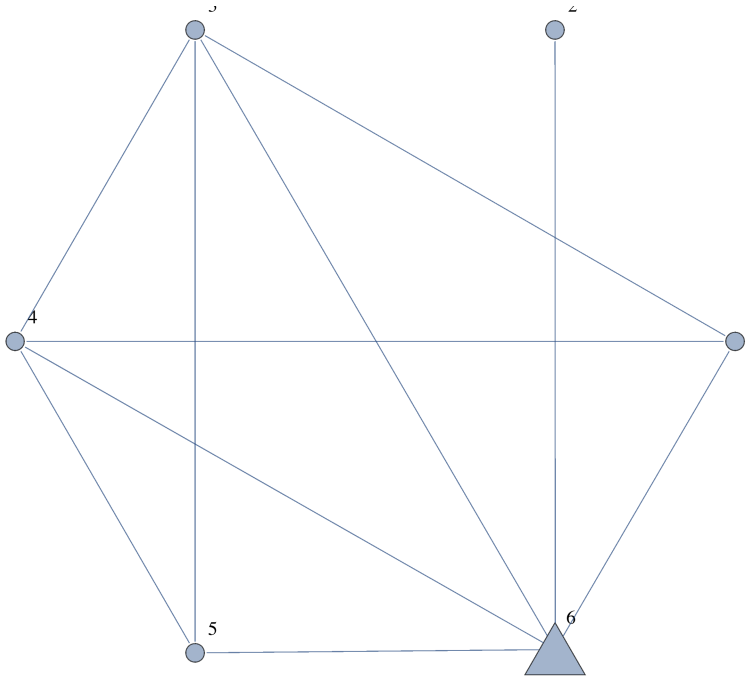


Player 2 lost!

■ **Player 1's Turn**

(++0+\_6)

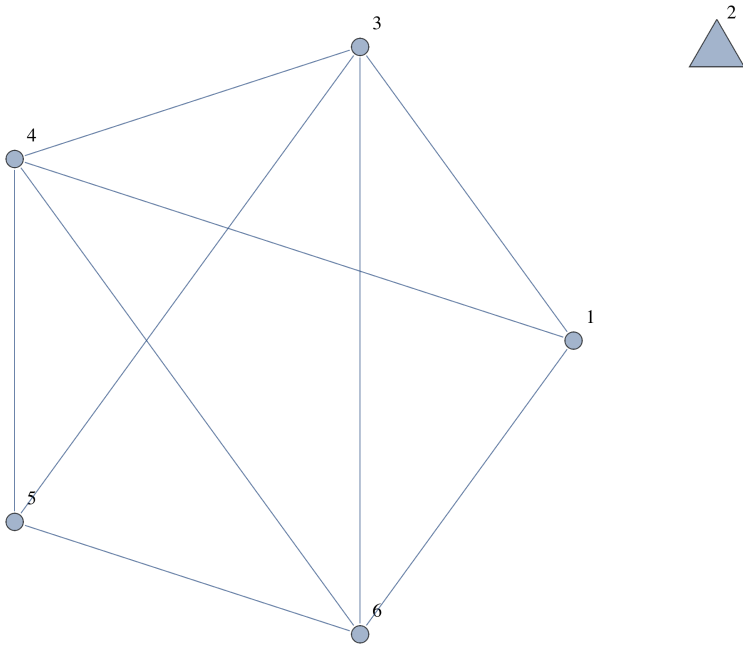
```
Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



■ Player 2's Turn

(++0+\_6)

```
Graph[{1, 2, 3, 4, 5, 6}, {1 ↔ 3, 1 ↔ 4, 1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```

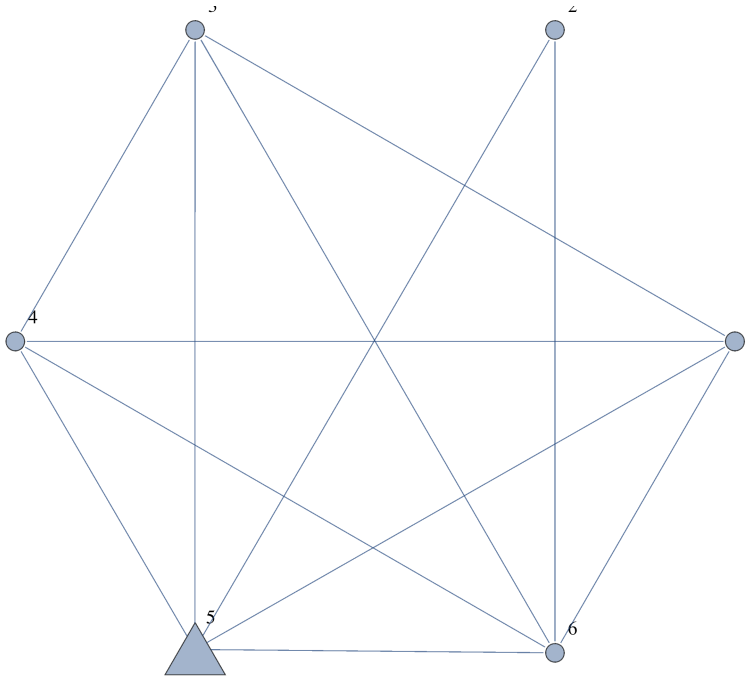


Player 2 lost!

■ Player 1's Turn

(+++)

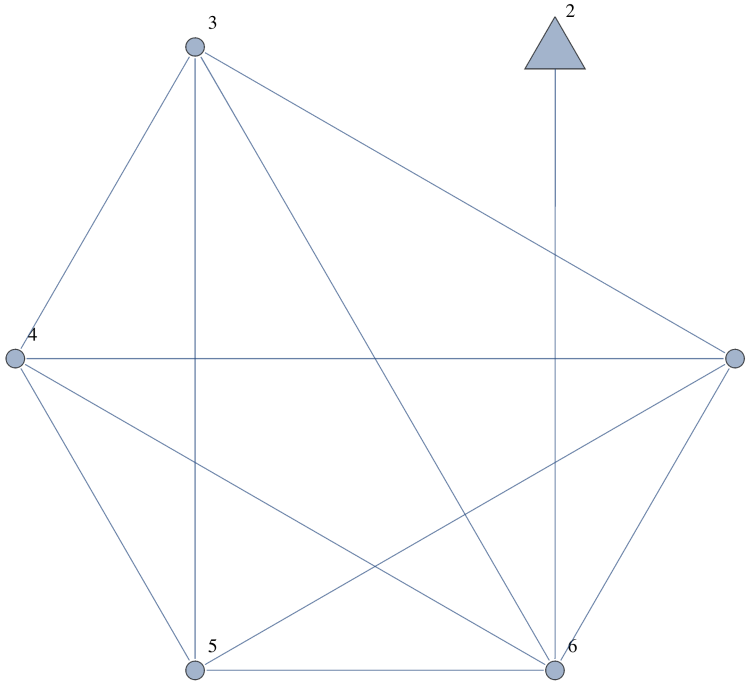
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 2 ↔ 5, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {5 -> "Triangle"},  
  VertexSize -> {5 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 2's Turn

(+++)

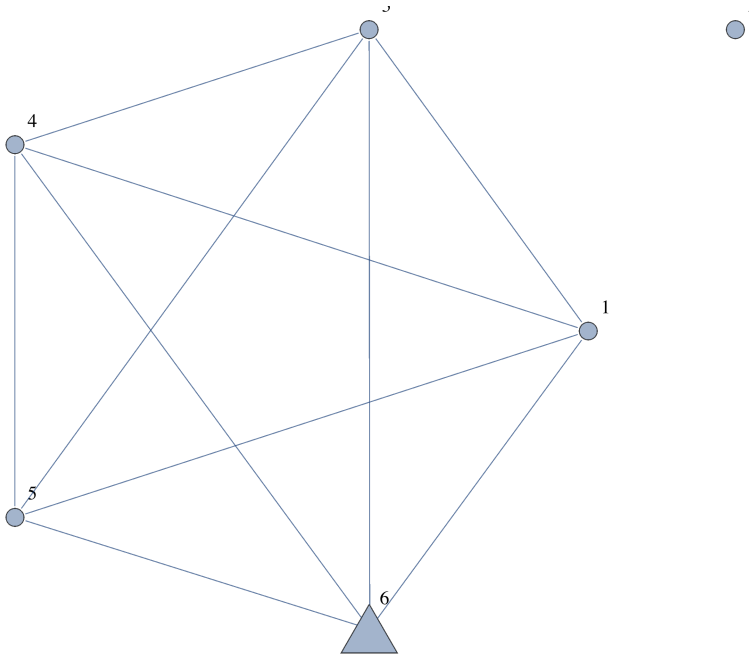
```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



#### ■ Player 1's Turn

(+++0)

```
Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



What remains is a  $K_5$ . Since the first player to play a  $K_5$  wins, Player 1 will win this game. Hence, Player 2 lost!

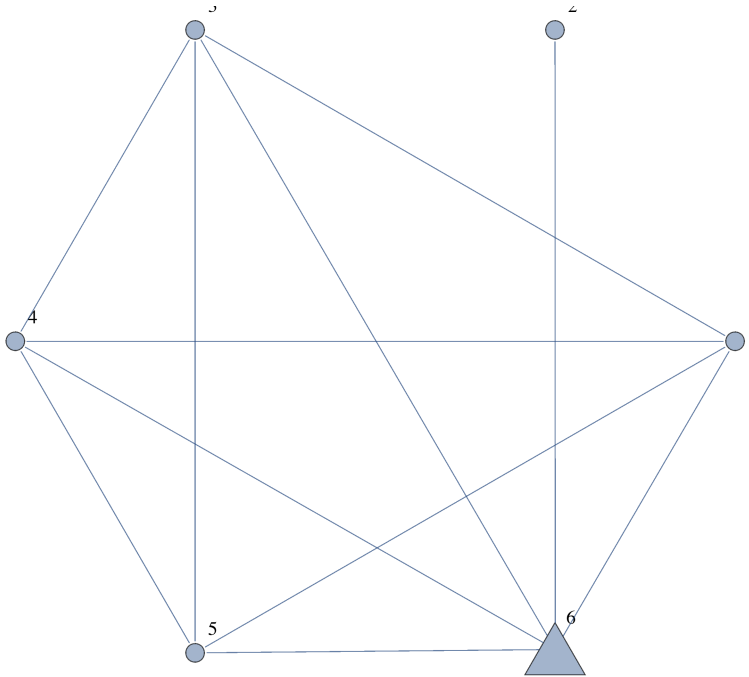
■ **Player 1's Turn**

(++++)

```

Graph[{1, 2, 3, 4, 5, 6},
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 2 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},
  VertexLabels -> "Name", VertexShapeFunction -> {6 -> "Triangle"},
  VertexSize -> {6 -> 0.15}, GraphLayout -> "CircularEmbedding"]

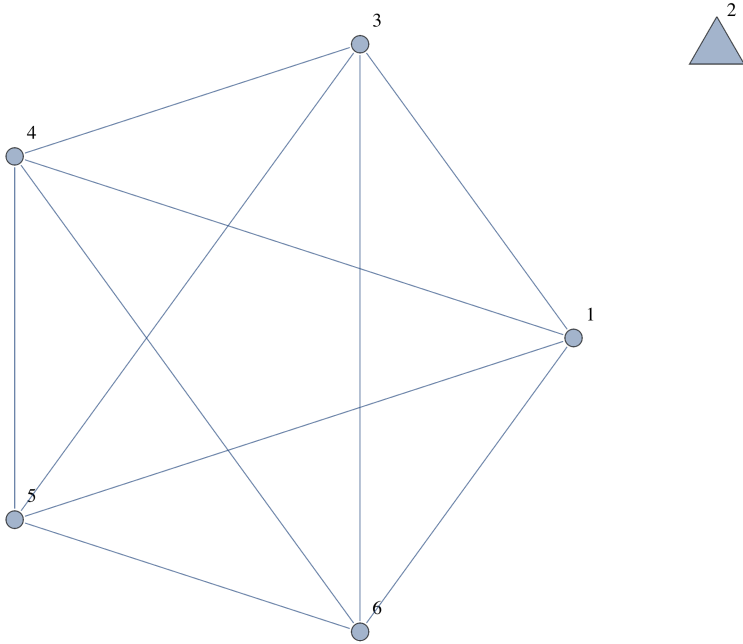
```



### ■ Player 2's Turn

(++++)

```
Graph[{1, 2, 3, 4, 5, 6},  
  {1 ↔ 3, 1 ↔ 4, 1 ↔ 5, 1 ↔ 6, 3 ↔ 4, 3 ↔ 5, 3 ↔ 6, 4 ↔ 5, 4 ↔ 6, 5 ↔ 6},  
  VertexLabels -> "Name", VertexShapeFunction -> {2 -> "Triangle"},  
  VertexSize -> {2 -> 0.15}, GraphLayout -> "CircularEmbedding"]
```



Player 2 lost!