**Jig-Saw Problem - Circles**

Sketch a graph of the following quadratic function and complete the table provided.

$$y=x^{2}+2x-8$$



|  |  |
| --- | --- |
|  | $$y=x^{2}+2x-8$$ |
| **Vertex** | (-1, -9) |
| **Maximum or minimum value** | Minimum y = -9 |
| **y-intercept** | y = -8 |
| ***x*-intercept(s)** | x = -4, 2 |
| **Equation of the Axis of Symmetry** | x = -1 |
| **Domain** | $$x\in R$$ |
| **Range** | $$y\geq -9$$ |

**Jig-Saw Problem - Triangles**

Sketch a graph of the following quadratic function and complete the table provided.

$$y=(x+1)^{2}-9$$



|  |  |
| --- | --- |
|  | $$y=(x+1)^{2}-9$$ |
| **Vertex** | (-1, -9) |
| **Maximum or minimum value** | Minimum y = -9 |
| **y-intercept** | y = -8 |
| ***x*-intercept(s)** | x = -4, 2 |
| **Equation of the Axis of Symmetry** | x = -1 |
| **Domain** | $$x\in R$$ |
| **Range** | $$y\geq -9$$ |

**Jig-Saw Problem - Squares**

Sketch a graph of the following quadratic function and complete the table provided.

$$y=\left(x+4\right)(x-2)$$



|  |  |
| --- | --- |
|  | $$y=\left(x+4\right)(x-2)$$ |
| **Vertex** | (-1, -9) |
| **Maximum or minimum value** | Minimum y = -9 |
| **y-intercept** | y = -8 |
| ***x*-intercept(s)** | x = -4, 2 |
| **Equation of the Axis of Symmetry** | x = -1 |
| **Domain** | $$x\in R$$ |
| **Range** | $$y\geq -9$$ |

**Jig-Saw Problem - Stars**

Sketch a graph of the following quadratic function and complete the table provided.



|  |  |
| --- | --- |
| ***x*** | ***y*** |
| -5 | 477 |
| -4 | 01 |
| -1 | -9 |
| 0 | --8 0 |
| 2 | 0 |
| 3 | 77 |

|  |  |
| --- | --- |
| **Vertex** | (-1, -9) |
| **Maximum or minimum value** | Minimum y = -9 |
| **y-intercept** | y = -8 |
| ***x*-intercept(s)** | x = -4, 2 |
| **Equation of the Axis of Symmetry** | x = -1 |
| **Domain** | $$x\in R$$ |
| **Range** | $$y\geq -9$$ |