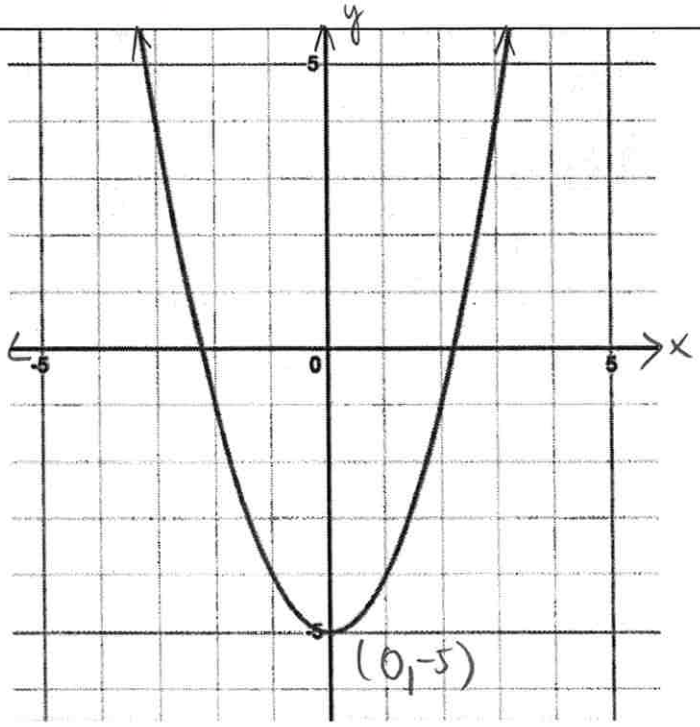
PC11

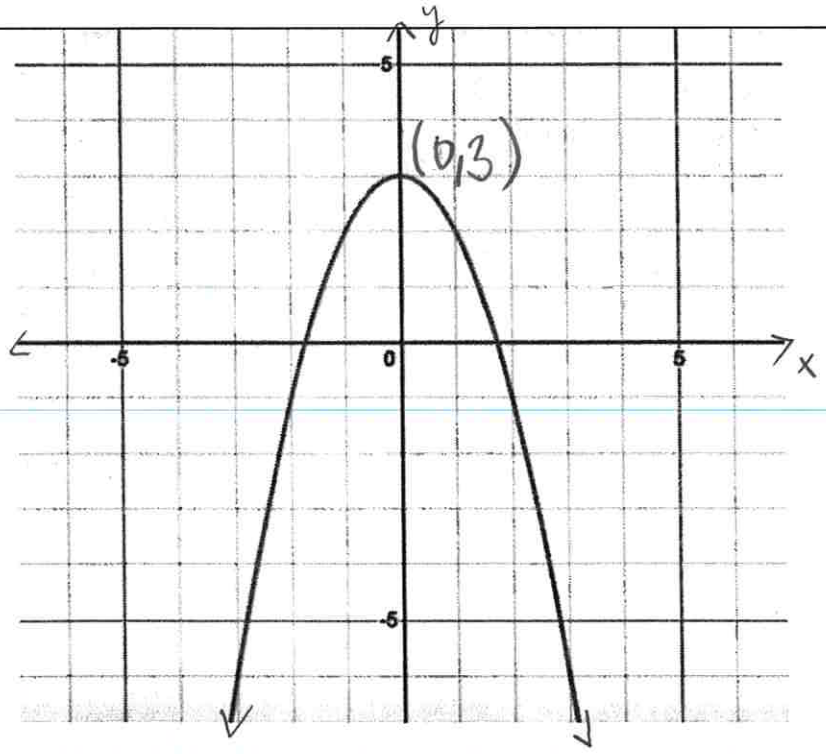
KEY

Describing Parabolas

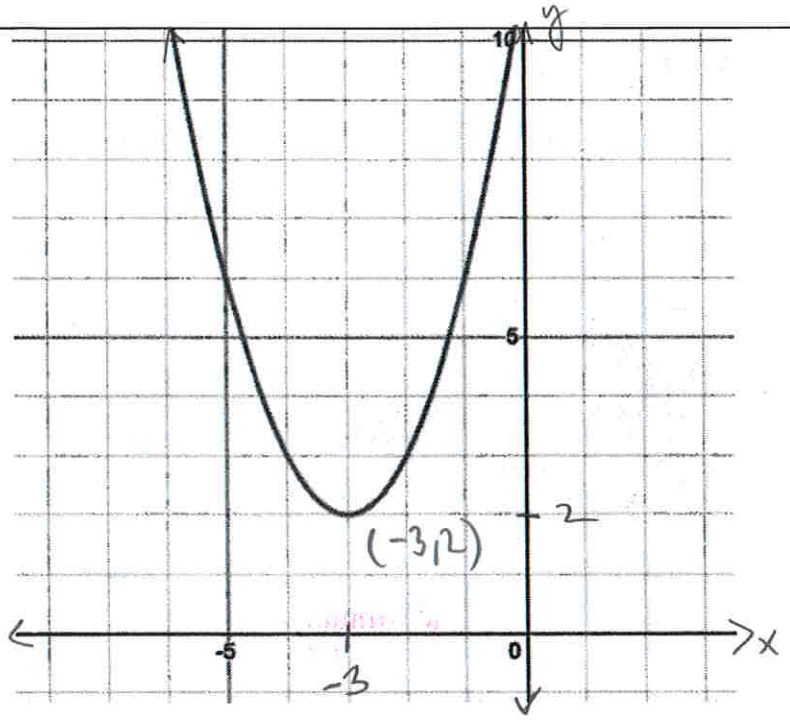
➢ **Before filling in the charts, give each graph appropriate arrows and labels.**



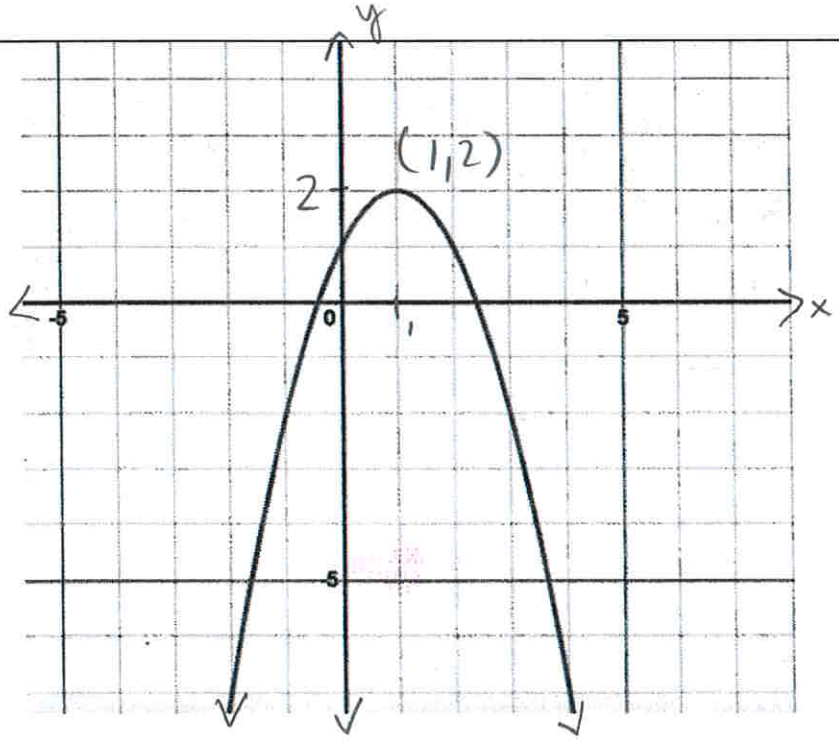
Domain $D: \{x \mid x \in \mathbb{R}\}$
Range $R: \{y \mid y \geq -5, y \in \mathbb{R}\}$
End behavior = opening up
Vertex $(0, -5)$
Maximum or minimum value $y = -5$
Equation of the axis of symmetry $x = 0$



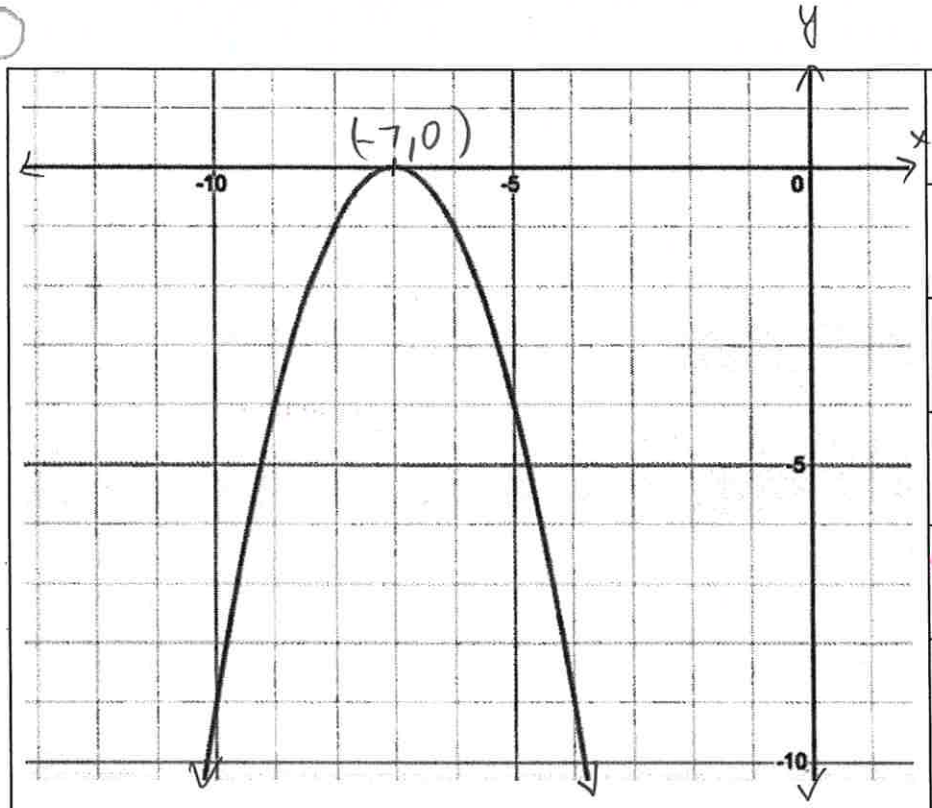
Domain $D: \{x \mid x \in \mathbb{R}\}$
Range $R: \{y \mid y \leq 3, y \in \mathbb{R}\}$
End behavior = opening down
Vertex $(0, 3)$
Maximum or minimum value $y = 3$
Equation of the axis of symmetry $x = 0$



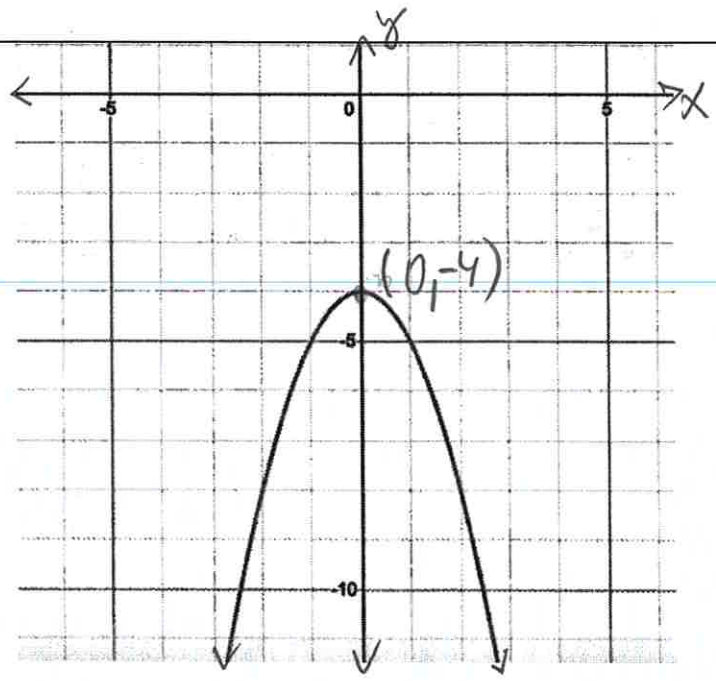
Domain $D: \{x \mid x \in \mathbb{R}\}$
Range $R: \{y \mid y \geq 2, y \in \mathbb{R}\}$
End behavior = opening up
Vertex $(-3, 2)$
Maximum or minimum value $y = 2$
Equation of the axis of symmetry $x = -3$



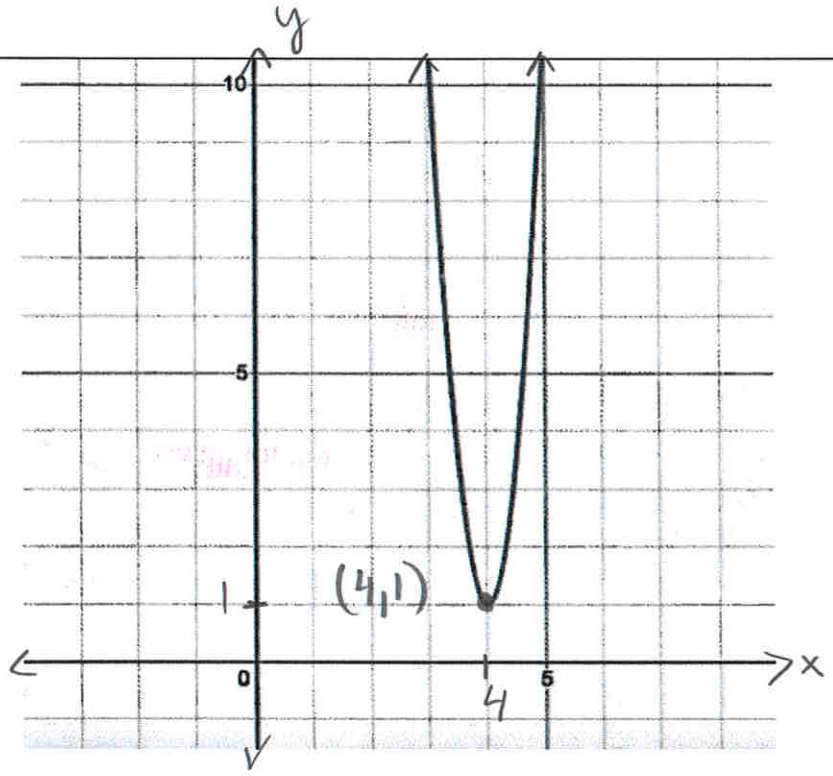
Domain $D: \{x \mid x \in \mathbb{R}\}$
Range $R: \{y \mid y \leq 2, y \in \mathbb{R}\}$
End behavior = opening down
Vertex $(1, 2)$
Maximum or minimum value $y = 2$
Equation of the axis of symmetry $x = 1$



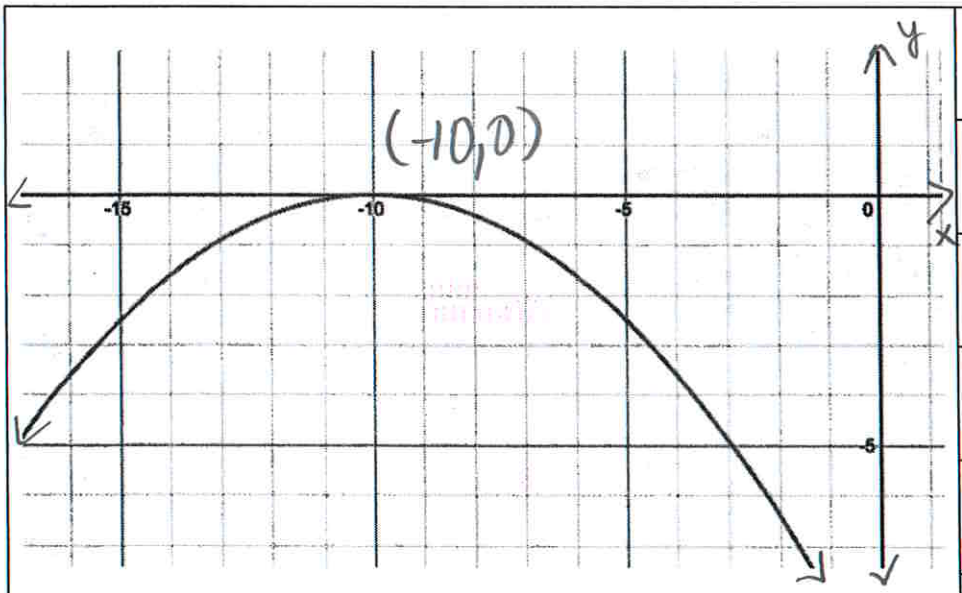
Domain $D: \{x \mid x \in \mathbb{R}\}$
Range $R: \{y \mid y \leq 0, y \in \mathbb{R}\}$
End behavior = opening down
Vertex $(-7,0)$
Maximum or minimum value $y = 0$
Equation of the axis of symmetry $x = -7$



Domain $D: \{x \mid x \in \mathbb{R}\}$
Range $R: \{y \mid y \leq -6, y \in \mathbb{R}\}$
End behavior = opening down
Vertex $(0,-4)$
Maximum or minimum value $y = -4$
Equation of the axis of symmetry $x = 0$



Domain $D: \{x \mid x \in \mathbb{R}\}$
Range $R: \{y \mid y \geq 1, y \in \mathbb{R}\}$
End behavior = opening up
Vertex $(4,1)$
Maximum or minimum value $y = 1$
Equation of the axis of symmetry $x = 4$



Domain $D: \{x \mid x \in \mathbb{R}\}$
Range $R: \{y \mid y \leq 0, y \in \mathbb{R}\}$
End behavior = opening down
Vertex $(-10,0)$
Maximum or minimum value $y = 0$
Equation of the axis of symmetry $x = -10$