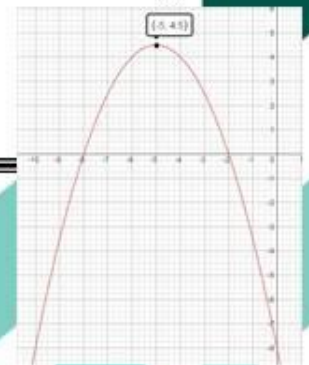
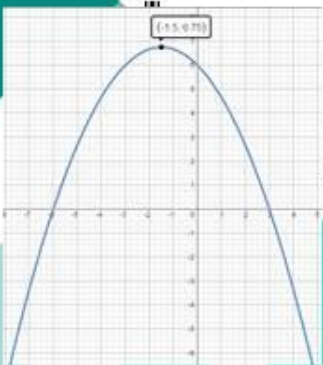


# FEATURES OF QUADRATIC FUNCTIONS

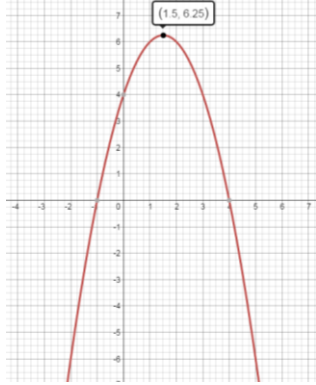


## FEATURES OF QUADRATIC FUNCTIONS

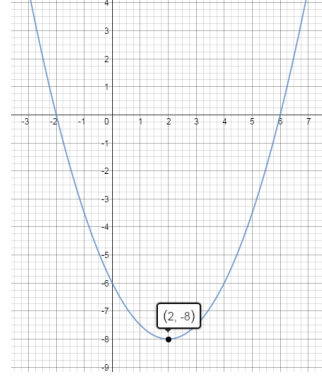
Using the graphs on the following page, determine if the parabola opens up/down, find the vertex, axis of symmetry, the solutions (if any), y-intercept, domain, and range.

<p>1. <math>f(x) = -x^2 + 3x + 4</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>4. <math>f(x) = \frac{1}{2}x^2 - 2x - 6</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>7. <math>f(x) = -\frac{1}{3}x^2 - x + 6</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>10. <math>f(x) = x^2 + 4x + 4</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>13. <math>f(x) = -x^2 + 6x - 5</math> Opens                      up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>
<p>2. <math>f(x) = x^2</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>5. <math>f(x) = -\frac{1}{4}x^2 + 3x - 5</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>8. <math>f(x) = 2x^2 - 4x + 2</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>11. <math>f(x) = x^2 + 7x + 10</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>14. <math>f(x) = -\frac{1}{2}x^2 - 5x - 8</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>
<p>3. <math>f(x) = x^2 + 5x + 4</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>6. <math>f(x) = \frac{1}{3}x^2 + 2x</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>9. <math>f(x) = x^2 - 8x + 12</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>12. <math>f(x) = -x^2 + 3x + 10</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>	<p>15. <math>f(x) = \frac{1}{2}x^2 - 4x + 6</math>                      Opens up/down: _____                      Vertex: _____                      Axis of symmetry: _____                      Solution(s): _____                      _____                      y-int: _____                      Domain: _____                      Range: _____</p>

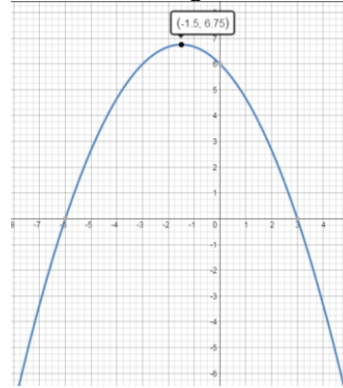
$$1. f(x) = -x^2 + 3x + 4$$



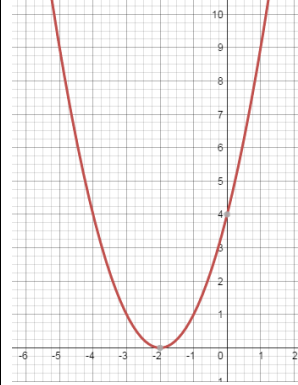
$$4. f(x) = \frac{1}{2}x^2 - 2x - 6$$



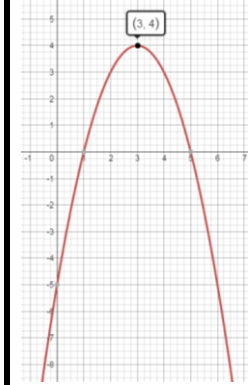
$$7. f(x) = -\frac{1}{3}x^2 - x + 6$$



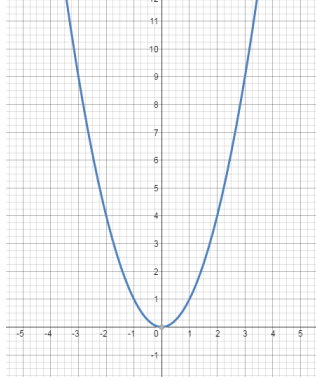
$$10. f(x) = x^2 + 4x + 4$$



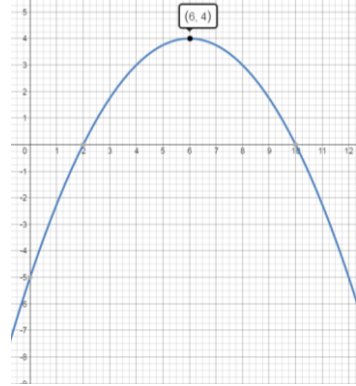
$$13. f(x) = -x^2 + 6x - 5$$



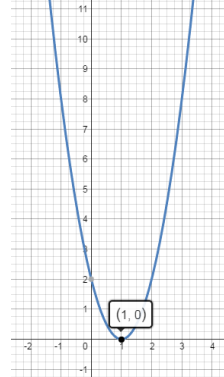
$$2. f(x) = x^2$$



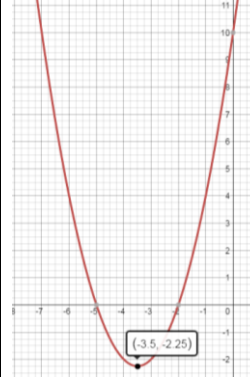
$$5. f(x) = -\frac{1}{4}x^2 + 3x - 5$$



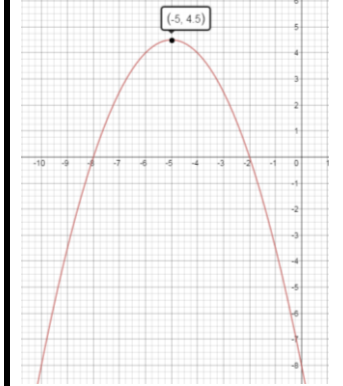
$$8. f(x) = 2x^2 - 4x + 2$$



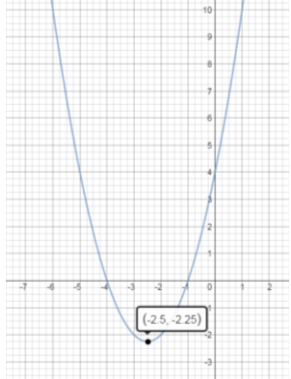
$$11. f(x) = x^2 + 7x + 10$$



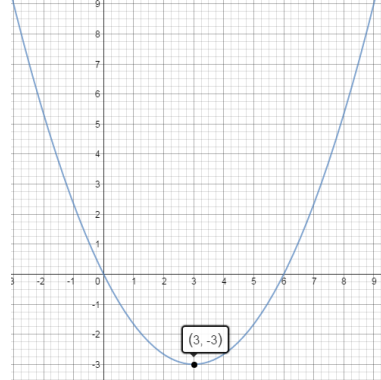
$$14. f(x) = -\frac{1}{2}x^2 - 5x - 8$$



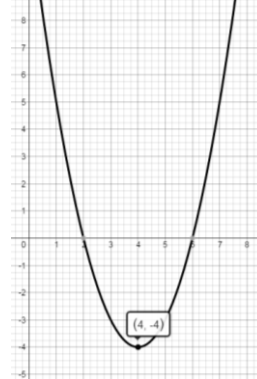
$$3. f(x) = x^2 + 5x + 4$$



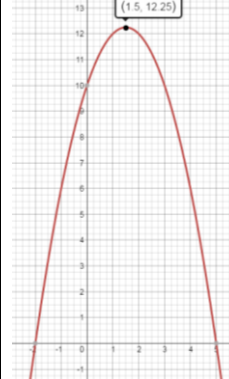
$$6. f(x) = \frac{1}{3}x^2 + 2x$$



$$9. f(x) = x^2 - 8x + 12$$



$$12. f(x) = -x^2 + 3x + 10$$



$$15. f(x) = \frac{1}{2}x^2 - 4x + 6$$

