

Finding the Equation of a Parabola **Write the equation of the following parabolas.**

- 1) Vertex (0, 0) and Focus (0, 2)
- 2) Vertex (3, 2) and Focus (3, 4)
- 3) Vertex (1, 1) and Focus (1, 6)
- 4) Vertex (− 1, 2) and Focus (− 1, 5)
- 5) Vertex (2, 2) and Focus (2, 6)
- 6) Vertex (0, 1) and Focus (0, 2)
- 7) Vertex (2, 1) and Focus (4, 1)
- 8) Vertex (5, 0) and Focus (9, 0)
- 9) Vertex (− 2, 4) and Focus (2, 4)
- 10) Vertex (− 4, 2) and Focus (0, 2)

Answers***Finding the Equation of a Parabola***

Write the equation of the following parabolas.

- 1) Vertex (0, 0) and Focus (0, 2): $x^2 = 8y$
- 2) Vertex (3, 2) and Focus (3, 4): $(x - 3)^2 = 8(y - 2)$
- 3) Vertex (1, 1) and Focus (1, 6): $(x - 1)^2 = 20(y - 1)$
- 4) Vertex (-1, 2) and Focus (-1, 5): $(x + 1)^2 = 12(y - 2)$
- 5) Vertex (2, 2) and Focus (2, 6): $(x - 2)^2 = 8(y - 2)$
- 6) Vertex (0, 1) and Focus (0, 2): $x^2 = 8(y - 1)$
- 7) Vertex (2, 1) and Focus (4, 1): $(y - 1)^2 = 8(x - 2)$
- 8) Vertex (5, 0) and Focus (9, 0): $(y - 1)^2 = 8(x - 2)$
- 9) Vertex (-2, 4) and Focus (2, 4): $(y - 4)^2 = 16(x + 2)$
- 10) Vertex (-4, 2) and Focus (0, 2): $(y + 4)^2 = 16x$