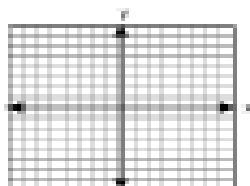


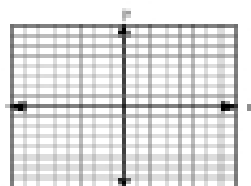
Given that vertex form of a quadratic function is $f(x) = a(x - h)^2 + k$, graph the parabola and state how it was translated from $f(x) = x^2$.

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



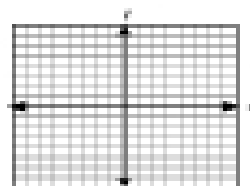
Vertex: _____
 Opens: _____
 Left/right _____ units.
 Up/down _____ units.
 Vertically stretched/
 shrunk by _____

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



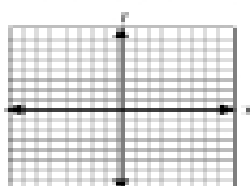
Vertex: _____
 Opens: _____
 Left/right _____ units.
 Up/down _____ units.
 Vertically stretched/
 shrunk by _____

3. $f(x) = \frac{2}{3}(x - 4)^2 + 6$



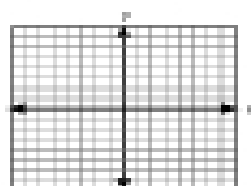
Vertex: _____
 Opens: _____
 Left/right _____ units.
 Up/down _____ units.
 Vertically stretched/
 shrunk by _____

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



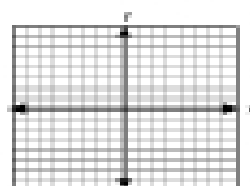
Vertex: _____
 Opens: _____
 Left/right _____ units.
 Up/down _____ units.
 Vertically stretched/
 shrunk by _____

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



Vertex: _____
 Opens: _____
 Left/right _____ units.
 Up/down _____ units.
 Vertically stretched/
 shrunk by _____

6. $f(x) = 3(x - 8)^2 + 3$



Vertex: _____
 Opens: _____
 Left/right _____ units.
 Up/down _____ units.
 Vertically stretched/
 shrunk by _____