# PRACTICE WRITING QUADRATIC EQUATIONS VERTEX FORM

Quadratic function $f$ has vertex $(4, 15)$ and passes through the point $(1, 20)$. Which equation represents $f$?

Ⓐ $f(x) = -\frac{5}{9}(x - 4)^2 + 15$

Ⓑ $f(x) = \frac{5}{9}(x - 4)^2 + 15$

Ⓒ $f(x) = -\frac{35}{9}(x - 4)^2 - 15$

Ⓓ $f(x) = \frac{35}{9}(x - 4)^2 - 15$


Which function is equivalent to $y = 3(x + 2)^2 + 7$?

**A** $y = 3x^2 + 12x + 33$

**B** $y = 3x^2 + 12x + 19$

**C** $y = 3x^2 + 19$

**D** $y = 3x^2 + 33$