

The functions below are written in vertex form or intercept form. Rewrite them in standard form.

1.  $y = (x + 4)(x + 3)$

2.  $f(x) = 4(x + 1)(x - 6)$

3.  $y = -3(x - 2)(x - 4)$

4.  $h(x) = (x + 5)^2 - 2$

5.  $g(x) = -(x + 6)^2 + 10$

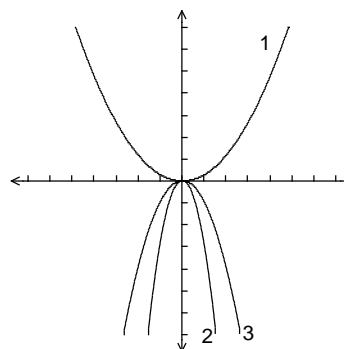
6.  $y = 5(x + 3)^2 - 4$

7. In problems 1—6, what do you notice about the value of  $a$  when you change from vertex form or intercept form to standard form?

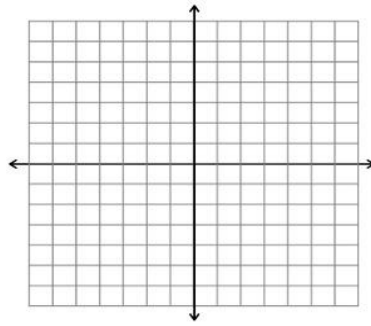
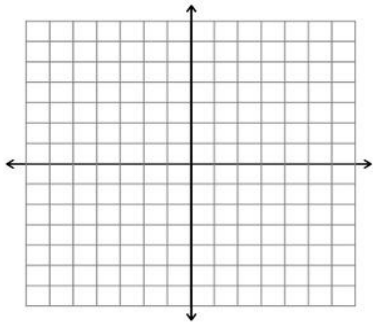
Three graphs are shown below. Identify the graph or graphs that fit each description.

8.  $a > 0$

9.  $a < 0$

10.  $|a|$  has the least value11.  $|a|$  has the greatest value

**12a.** Graph  $y = 2(x + 1)(x - 3)$  and  $y = 2(x - 1)^2 - 8$ .



**b.** Convert  $y = 2(x + 1)(x - 3)$  and  $y = 2(x - 1)^2 - 8$  to standard form.

**c.** Compare the two functions.