Name: Key

9.1 (intercept form)

Determine the a) whether the graph of the function opens up or down, b) the x-intercepts and c) the axis of symmetry A.O.S.

1) $y = -3(x + 2)(x + 8)$

a) down

b) $-2, -8$

c) $x = -5$

2) $y = \frac{3}{8}(x - 1)(x + 9)$

a) up

b) $1, -9$

c) $x = -4$

3) $y = 5(x - 5)(x - 7)$

a) up

b) $5, 7$

c) 6

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

a) up

b) $-1, -4$

c) $x = -\frac{5}{2}$

5) $y = x^2 + 7x + 6$ $(x+6)(x+1)$

a) up

b) $-6, -1$

c) $-\frac{7}{2}$

6) $g(x) = 4x^2 + 12x + 8$ $4(x^2+3x+2)$ $4(x+2)(x+1)$

a) up

b) $-2, -1$

c) $-\frac{3}{2}$

7) $h(x) = 2x^2 + 11x - 6$ $x^2+11x-12$ $(x+12)(x-1)$ $(x+6)(2x-1)$

a) $-6, \frac{1}{2}$

b) up

c) $-\frac{11}{4}$ $x = \frac{}{}$

8) $f(x)\ y = -3x^2 - 6x + 9$ $-3(x^2+2x-3)$ $-3(x+3)(x-1)$

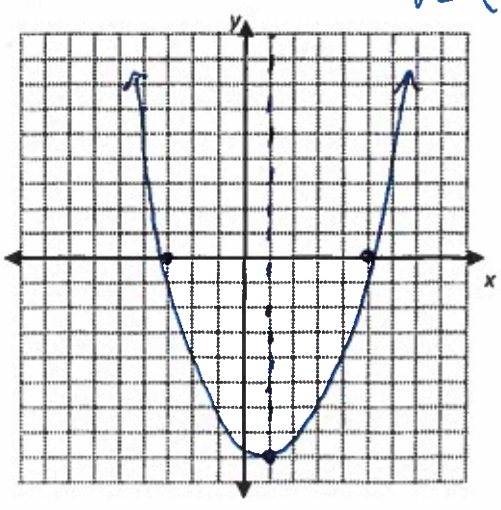
a) down

b) $-3, 1$

c) $x = -1$

Graph the quadratic function:

9) $y = \frac{1}{2}(x - 5)(x + 3)$ up x-int: $5, -3$ a.o.s: $x = 1$ $V = (1, -8)$ $\frac{1}{2}(1-5)(1+3)$ -8



10) $f(x)\ y = -x^2 + 8x - 12$ $-1(x^2 - 8x + 12)$ $-1(x-6)(x-2)$ down x-int: $6, 2$ a.o.s. $x = 4$ $V = (4, 4)$ $-(4)^2+8(4)-12$ $-16+32-12$