

Finding Key Features of Quadratics ws

Name: _____ Hr: _____

Find the vertex given an equation in standard form $y = ax^2 + bx + c$ using $\frac{-b}{2a}$.

1. $y = x^2 - 4x + 1$

2. $y = -5x^2 + 10x + 4$

Find the vertex given an equation in vertex form $y = a(x-h)^2 + k$.

3. $y = 3(x-1)^2 + 2$

4. $y = -0.5(x+3)^2$

5. $y = x^2 - 5$

Find the vertex given an equation in factored form $y = (x-p)(x-q)$ using $\frac{p+q}{2}$.

6. $y = (x-2)(x-6)$

7. $y = -2(x+3)(x+7)$

8. $y = (x-3)(x+3)$

Find the vertex.

9. $y = -x^2 + 6x + 8$

10. $y = x^2 - 16$

11. $y = (x-5)(x-3)$

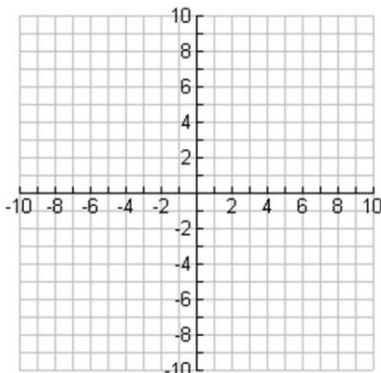
12. $y = (x+4)^2 + 5$

13. $y = (x+5)(x-3)$

14. $y = 2x^2 - 3x + 1$

Given the equations, find the parts and sketch a graph.

15. $f(x) = -x^2 + 7x - 6$



A) Vertex _____

B) Vertex Form _____

C) Axis of Symmetry _____

D) Max/Min & its value _____

E) y-intercept _____

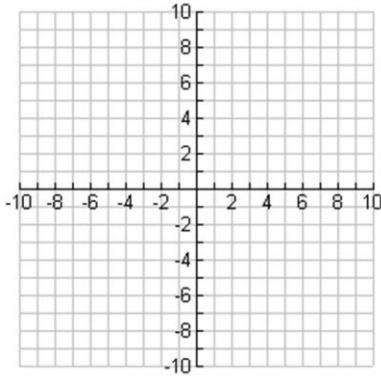
F) x-intercept(s) _____

G) Domain _____

H) Range _____

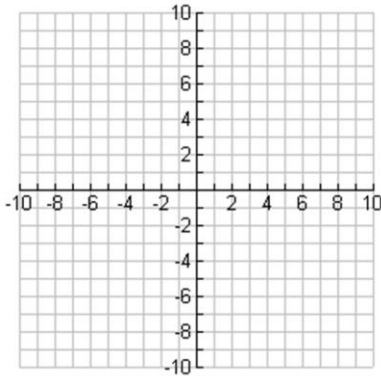
I) Find $f(-1)$ _____

16. $f(x) = -3(x+2)^2 - 4$



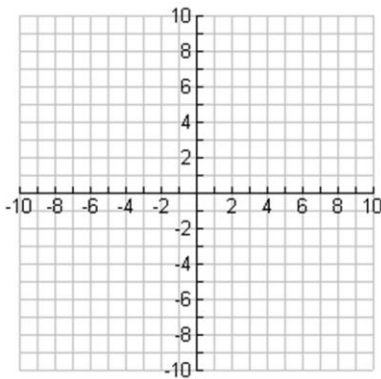
- A) Vertex _____
- B) Vertex Form _____
- C) Axis of Symmetry _____
- D) Max/Min & its value _____
- E) y-intercept _____
- F) x-intercept(s) _____
- G) Domain _____
- H) Range _____
- I) Find $f(-3)$ _____

17. $f(x) = -(x+1)(x-5)$



- A) Vertex _____
- B) Vertex Form _____
- C) Axis of Symmetry _____
- D) Max/Min & its value _____
- E) y-intercept _____
- F) x-intercept(s) _____
- G) Domain _____
- H) Range _____
- I) Find $f(3)$ _____

18. $f(x) = x^2 + 6x + 9$



- A) Vertex _____
- B) Vertex Form _____
- C) Axis of Symmetry _____
- D) Max/Min & its value _____
- E) y-intercept _____
- F) x-intercept(s) _____
- G) Domain _____
- H) Range _____
- I) Find $f(-5)$ _____