

Extra Practice-Finding Characteristics with Equations

1. $y = (x + 4)(x + 8)$

Form? _____

Vertex: _____ extrema: _____

AOS: _____ y-intercept: _____

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

Form? _____

Vertex: _____ extrema: _____

AOS: _____ y-intercept: _____

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

Form? _____

Vertex: _____ extrema: _____

AOS: _____ y-intercept: _____

4. $y = (x + 8)^2$

Form? _____

Vertex: _____ extrema: _____

AOS: _____ y-intercept: _____

5. $y = -2x^2 + 3$

Form? _____

Vertex: _____ extrema: _____

AOS: _____ y-intercept: _____

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

Form? _____

Vertex: _____ extrema: _____

AOS: _____ y-intercept: _____

Extra Practice-Finding Characteristics with Equations

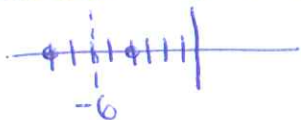
1. $y = (x+4)(x+8)$

Form? Intercept

Vertex: $(-6, -4)$ extrema: min at -4

AOS: $x = -6$ y-intercept: $(0, 32)$

zeros: -4 + -8



$$y = (-6+4)(-6+8)$$

$$= (-2)(2)$$

$$= -4$$

$$y = (0+4)(0+8)$$

$$= (4)(8)$$

$$= 32$$

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

Form? Vertex

Vertex: $(6, -4)$ extrema: min at -4

AOS: $x = 6$ y-intercept: $(0, 32)$

$$y = (0-6)^2 - 4$$

$$= (-6)^2 - 4$$

$$= 36 - 4$$

$$= 32$$

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

Form? Standard

Vertex: $(-3, 13)$ extrema: max at 13

AOS: $x = -3$ y-intercept: $(0, 4)$

$$x = \frac{-b}{2a} = \frac{-(-6)}{2(-1)} = \frac{6}{-2} = -3$$

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

$$= -9 + 18 + 4$$

$$= 9 + 4$$

$$= 13$$

4. $y = (x+8)^2$

Form? Vertex

Vertex: $(-8, 0)$ extrema: min at 0

AOS: $x = -8$ y-intercept: $(0, 64)$

$$y = (0+8)^2$$

$$= (8)^2$$

$$= 64$$

5. $y = -2x^2 + 3$

Form? standard / Vertex

Vertex: $(0, 3)$ extrema: max at 3

AOS: $x = 0$ y-intercept: $(0, 3)$

$$x = \frac{-b}{2a} = \frac{-0}{2(-2)} = \frac{0}{-4} = 0$$

$$y = -2(0)^2 + 3$$

$$= 0 + 3$$

$$= 3$$

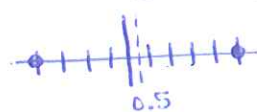
6. $y = -2(x-5)(x+4)$

Form? Intercept

Vertex: $(0.5, 40.5)$ extrema: max at 40.5

AOS: $x = 0.5$ y-intercept: $(0, 40)$

zeros: 5 + -4



$$y = -2(0-5)(0+4)$$

$$= -2(-5)(4)$$

$$= 40$$

$$y = -2(0.5-5)(0.5+4)$$

$$= -2(-4.5)(4.5)$$

$$= 40.5$$