

Name:

Answers.

Class:



Communication



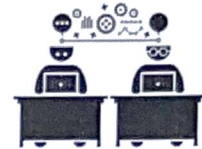
Successful Partnership



Encouragement



Solving Problem Together



Collaboration

For each of the below, write the factored form of the function graphed and detail the features listed.

Question 01

 $f(x) =$

$$(x-3)(x-5)$$

Root 1:

$$(3, 0)$$

Root 2:

$$(5, 0)$$

Line of Symmetry:

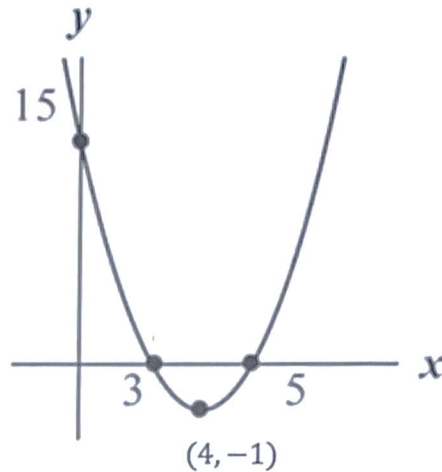
$$x = 4$$

Vertex:

$$(4, -1)$$

y-intercept:

$$(0, 15) \text{ or } c = 15$$



* I know $a=1$ because (-3) times (-5) is 15 *
 \uparrow c

Question 02

 $f(x) =$

$$-(x-3)(x-5)$$

Root 1:

$$(3, 0)$$

Root 2:

$$(5, 0)$$

Line of Symmetry:

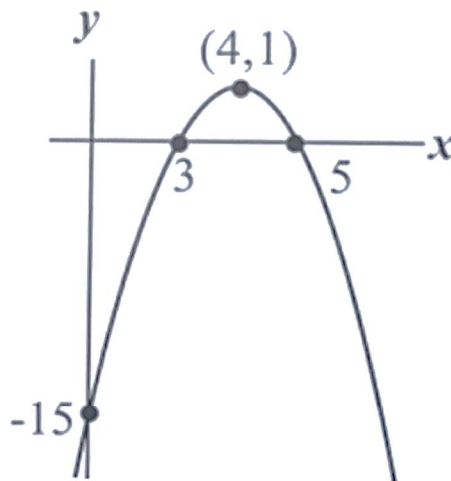
$$x = 4$$

Vertex:

$$(4, 1)$$

y-intercept:

$$(0, -15) \text{ or } c = -15$$



* I know $a=-1$ because $(-3)(-5)(-1)$ is -15 * Algebra 6-7
 \uparrow c

Question 03

$$f(x) = -2(x+7)(x-3)$$

Root 1: $(-7, 0)$

Root 2: $(3, 0)$

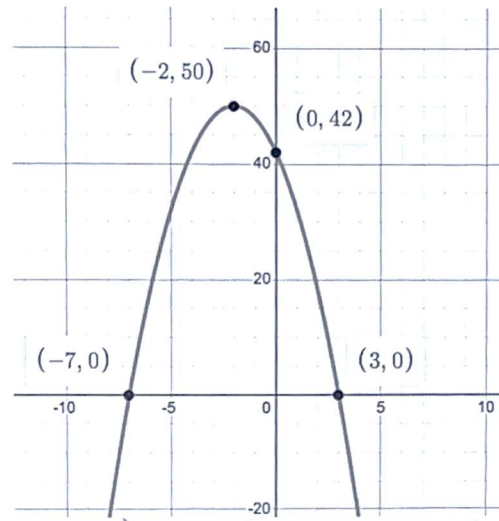
Line of Symmetry:

$$x = -2$$

Vertex: $(-2, 50)$

y-intercept: $(0, 42)$ or $c = 42$

* I know $a = -2$ because



$$(7)(-3)(-2) = 42 *$$

Question 04

$$f(x) = -\frac{1}{2}(x+4)(x-6)$$

Root 1: $(-4, 0)$

Root 2: $(6, 0)$

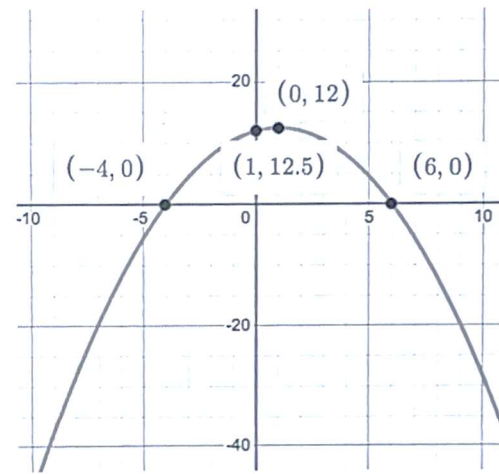
Line of Symmetry:

$$x = 1$$

Vertex: $(1, 12.5)$

y-intercept: $(0, 12)$ or $c = 12$

* I know $a = -\frac{1}{2}$ because



$$(4)(-6)\left(-\frac{1}{2}\right) = 12 *$$

Question 05

$$f(x) = -4(x+4)(x-2)$$

Root 1: $(-4, 0)$

Root 2: $(2, 0)$

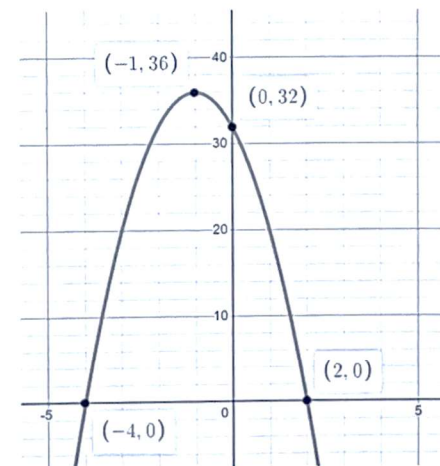
Line of Symmetry:

$$x = -1$$

Vertex: $(-1, 36)$

y-intercept: $(0, 32)$ or $c = 32$

* I know $a = -4$ because



$$(4)(-2)(-4) = 32 *$$