Blue Day

Wednesday, September 18, 2019 10:07 AM

Do Now

Tuesday, September 17, 2019 11:06 PM

$$9a^4 + 12a^2b^2 + 4b^4$$

Which of the following is equivalent to the expression shown above?

A) $(3a^2 + 2b^2)^2$

B) $(3a + 2b)^4$

C) $(9a^2 + 4b^2)^2$

D) $(9a + 4b)^4$

Assigned HW

Tuesday, September 17, 2019 11:07 PM

- Pearson Easy Bridge Online Assignment (2.1): Due 9/22
- 2.1 Notes due 9/22 (Focus)
- 2.2 Notes due 9/19 (Focus)

Question 1

Wednesday, September 18, 2019 4:00 AM

Quadratic functions are functions represented by which of the following general forms?

a) $f(x)=x^2$ b) $f(x)=ax+b$

c) $f(x)=ax^2+bx+c$ d) $f(x)=x^2+K$

Question 2

Wednesday, September 18, 2019 4:04 AM

Which of these is the parent function of a given quadratic function?

a) $f(x) = x^2$ b) $f(x) = ax + b$

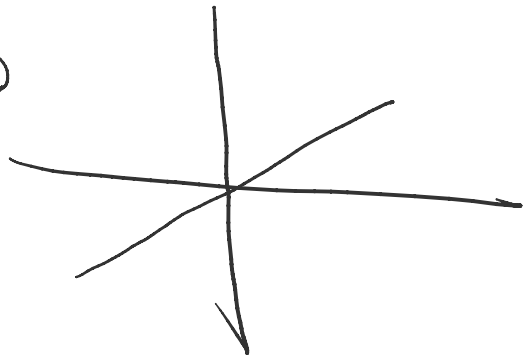
c) $f(x) = ax^2 + bx + c$ d) $f(x) = x^2 + K$

Question 3

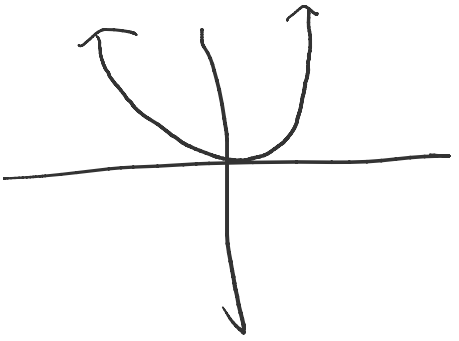
Wednesday, September 18, 2019 4:05 AM

What is the graph of the function $f(x) = x^2$

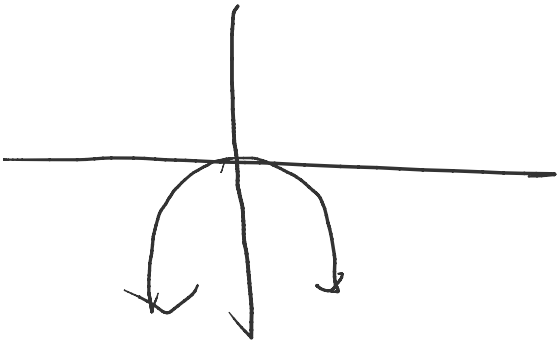
(a)



(b)



(c)



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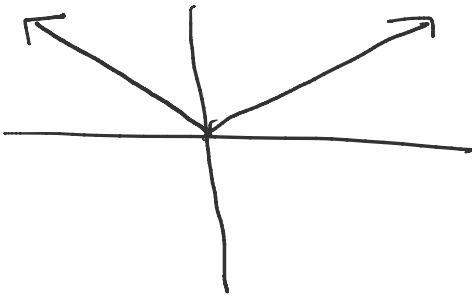


Vertex Form of a Quadratic Function

Wednesday, September 18, 2019 4:11 AM

Vertex Form:

Question 4

Wednesday, September 18, 2019 3:40 AM

Describe the transformation of the parent function $f(x) = x^2$

$g(x) = -(x-1)^2 + 2$

A. Open upward, shift right 1, up 2

B. Open downward, shift right 1, up 2

C. Open upward, shift left 1, up 2

C. Open downward, shift left 1, up 2

Make a quick sketch of the function above.

Question 5

Wednesday, September 18, 2019 4:09 AM

Describe the transformation of the circled part of the function:

$$f(x) = \frac{1}{3}(x+1)^2 - 2$$

A. Vertical compression by 1/3
B. Shift up by 1/3
C. Vertical stretch by 3
D. Shift down by 1/3

Compression

Draw sketch of the graph.

Question 6

Wednesday, September 18, 2019 4:17 AM

What is the vertex of $f(x) = 3(x - 2)^2 + 5$?

A. (3, 5)

B. (2, 5)

C. (-2,5)

D (5, -2)

Question 7

Wednesday, September 18, 2019 4:19 AM

Question 8

Wednesday, September 18, 2019 4:17 AM

What is the axis of symmetry of $f(x) = 3(x-2)^2 + 5$?

A. x = 2

B. x = -2

C. y = 5

D. y = 3

Question 9

Wednesday, September 18, 2019 4:20 AM

Question 10

Wednesday, September 18, 2019 4:17 AM

What is the maximum/minimum of $f(x) = 3(x-2)^2 + 5$?

A. Maximum = 2

B. Minimum = 2

C. Maximum = 5

D. Minimum = 5

Question 11

Wednesday, September 18, 2019 4:21 AM

What is the domain and range of $f(x) = 3(x-2)^2 + 5$?

A. Domain: $(-\infty, \infty)$; $Range$: $(2, 5)$

B. Domain: $(-\infty, \infty)$; $Range$: $(-\infty, 5]$

C. Domain: (-∞, ∞); Range: [5, ∞)

$D.\ Domain$: $(-\infty, 5]$; Range: $(-\infty, \infty)$

Question 12

Wednesday, September 18, 2019 4:25 AM

What is the equation of the parabola in vertex form? Vertex: (1, 2); Point: (2, -5)

A. $f(x) = -7(x-1)^2 + 2$ $B. f(x) = -5(x+1)^2 + 2$

$C. f(x) = 2(x+1)^2 - 5$ $D.\ f(x) = (x-1)^2 + 2$

Gold Day

Wednesday, September 18, 2019 10:07 AM

Do Now

Tuesday, September 17, 2019 11:06 PM

$$9a^4 + 12a^2b^2 + 4b^4$$

Which of the following is equivalent to the expression shown above?

A) $(3a^2 + 2b^2)^2$ $= (3a^2 + 2b^2)(3a^2 + 2b^2)$

$= 9a^4 + 6a^2b^2 + 6a^2b^2 + 4b^4$

$12a^2b^2$

B) $(3a + 2b)^4$

C) $(9a^2 + 4b^2)^2$

D) $(9a + 4b)^4$

Assigned HW

Tuesday, September 17, 2019 11:07 PM

- Pearson Easy Bridge Online Assignment (2.1): Due 9/22
- 2.1 Notes due 9/22 (Focus)
- 2.2 Notes due 9/22 (Focus)

Question 1

Wednesday, September 18, 2019 4:00 AM

Quadratic functions are functions represented by which of the following general forms?

a) $f(x)=x^2$ b) $f(x)=ax+b$

c) $f(x)=ax^2+bx+c$ d) $f(x)=x^2+K$

Standard form

Question 2

Wednesday, September 18, 2019 4:04 AM

Which of these is the parent function of a given quadratic function?

a) $f(x)=x^2$

b) $f(x)=ax+b$

c) $f(x)=ax^2+bx+c$

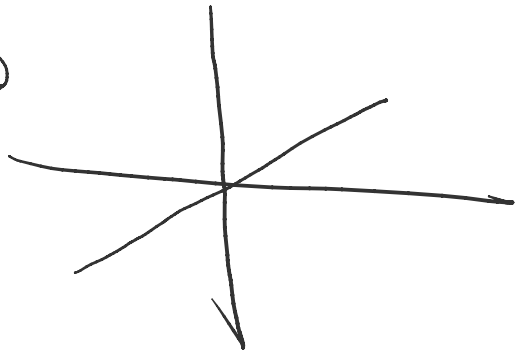
d) $f(x)=x^2+K$

Question 3

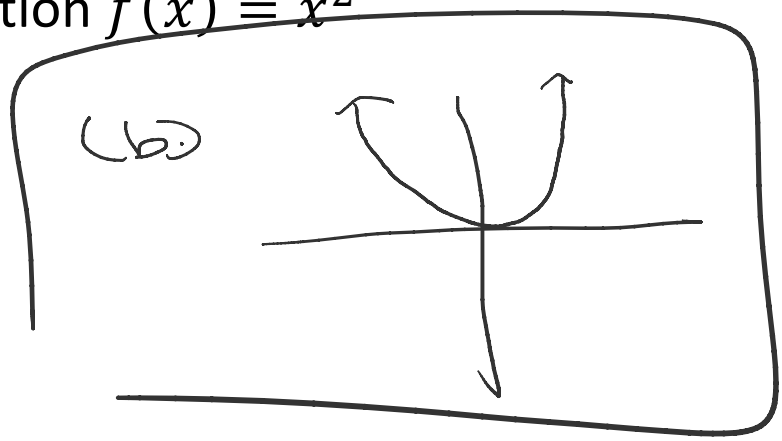
Wednesday, September 18, 2019 4:05 AM

What is the graph of the function $f(x) = x^2$

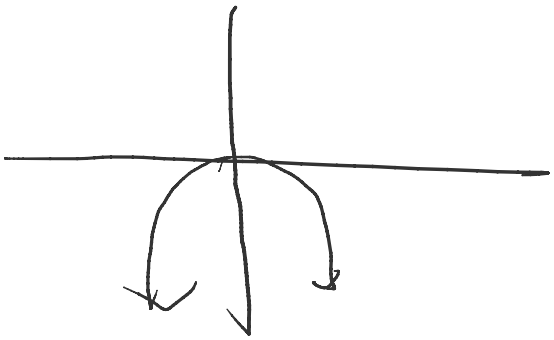
(a)



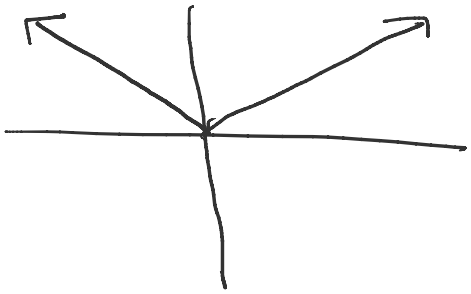
(b)



(c)



(d)



Vertex Form of a Quadratic Function

Wednesday, September 18, 2019 4:11 AM

Vertex Form: $f(x) = a(x-h)^2 + k$

h → left/right

k → up/down

$a+$ → opens up $\cup$

$a-$ → opens down $\cap$

$a > 1$ → Vertical Stretch (skinnier)

$0 < a < 1$ → Vertical Compression (wider)

Question 4

Wednesday, September 18, 2019 3:40 AM

Describe the transformation of the parent function $f(x) = x^2$

$g(x) = -(x-1)^2 + 2$

x transformations are reversed!

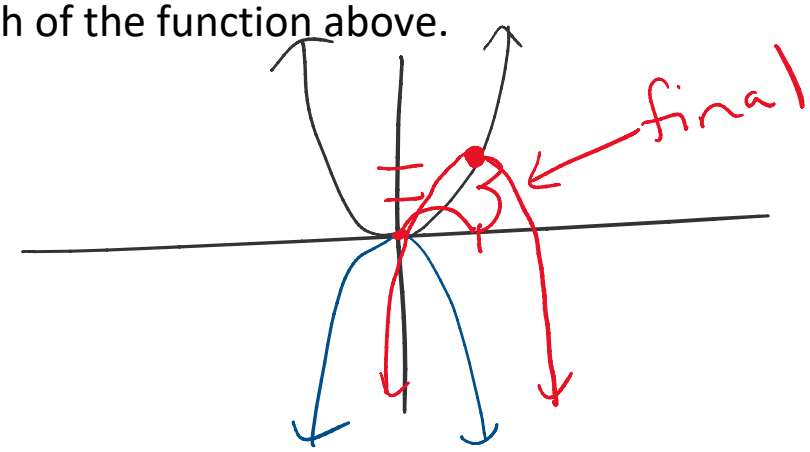
A. Open upward, shift right 1, up 2

B. Open downward, shift right 1, up 2

C. Open upward, shift left 1, up 2

C. Open downward, shift left 1, up 2

Make a quick sketch of the function above.



Question 5

Wednesday, September 18, 2019 4:09 AM

Describe the transformation of the circled part of the function:

$f(x) = \frac{1}{3}(x+1)^2 - 2$ $a(x-h)^2+k$ $= \frac{1}{3}(x-(-1))^2+(-2)$

$V(-1,-2)$

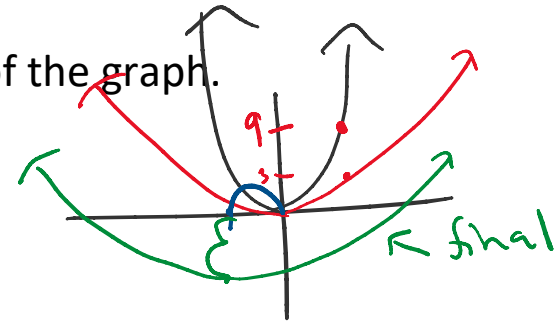
A. Vertical compression by 1/3

B. Shift up by 1/3

C. Vertical stretch by 3

D. Shift down by 1/3

Draw sketch of the graph.



Question 6

Wednesday, September 18, 2019 4:17 AM

What is the vertex of $f(x) = 3(x-2)^2 + 5$?

A. (3, 5)

B. (2, 5)

C. (-2,5)

D (5, -2)