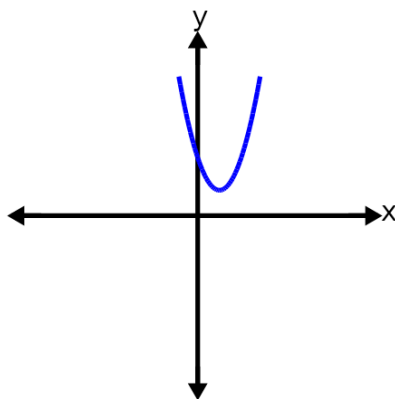




Quadratic Relations

1 Which root(s) would be valid for this quadratic function?



A

$$x = \frac{3 \pm i\sqrt{7}}{2}$$

B

$$x = 9.4$$

2 Complete the first and second differences. Is the function linear, quadratic, or neither?

x	y	1st Diff	2nd Diff
2	-4		
3	-2		
4	3		
5	11		
6	22		

A

Linear

B

Quadratic

C

Neither



Quadratic Relations

3 Is the function linear, quadratic, or neither?

x	y	1st Diff	2nd Diff
2	-3	0	
3	-3	-2	-2
4	-5	-2	-2
5	-9	-4	-2
6	-15	-6	

A
Linear

B
Neither

C
Quadratic

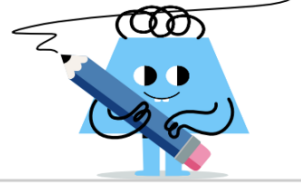
4 Which completed table shows a linear function?

A

x	y	1st Diff	2nd Diff
3	8	0	
4	8	3	3
5	11	6	3
6	17	9	3
7	26		

B

x	y	1st Diff	2nd Diff
3	-2	-3	
4	-5	-3	0
5	-8	-3	0
6	-11	-3	0
7	-14		



Quadratic Relations

- 5** What would the vertex of this function be?

$$y = 0.5(x + 3)^2 + 1$$

A (3, 1)	B (0.5, 1)
C (-3, -1)	D (0.5, -3)
E (1, -3)	F (-3, 1)

- 6** What is the X-coordinate of the vertex of this quadratic equation?

$$y = -4x^2 - 2x - 2$$

A $x = 0$	B $x = -0.25$
-----------	---------------

- 7** Complete the square and convert this to vertex form to find the vertex

$$y = 3x^2 + 6x + 2$$

A (-1, 1)	B (1, -1)
C (3, -1)	D (-1, -1)

- 8** Complete the square and convert this to vertex form to find the vertex

$$y = -2x^2 - 16x - 36$$

A (-4, 4)	B (-2, -4)
C (-4, -4)	D (4, -4)

- 9** Complete the square and convert this to vertex form to find the vertex

$$y = -1x^2 - 6x - 8$$

A (-3, -1)	B (-1, -3)
C (1, -3)	D (3, 1)
E (-3, 1)	F (-1, 1)

- 10** Complete the square and convert this to vertex form to find the vertex

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

A (2, -1)	B (2, 1)
C (1, 2)	D (-2, -1)
E (-1, 2)	F (1, -1)

- 11** Complete the square to factor this polynomial

$$y = -1x^2 - 4x - 3$$

A $y = -1(x + 2)^2 + 1$
B $y = -1(x - 2)^2 + 1$
C $y = -1(x + 2)^2 - 1$
D $y = (x - 2)^2 + 1$

- 12** Complete the square to factor this polynomial

$$y = 2x^2 - 12x + 19$$

A $y = 2(x - 3)^2 - 1$
B $y = 2(x - 3)^2 + 1$
C $y = -2(x - 3)^2 + 1$
D $y = 2(x + 3)^2 + 1$



Quadratic Relations

13 Complete the square to factor this polynomial

$$y = -4x^2 + 32x - 66$$

A $y = -4(x - 4)^2 - 2$

B $y = 4(x - 4)^2 - 2$

C $y = -4(x + 4)^2 - 2$

D $y = -4(x - 4)^2 + 2$

14 What form is this quadratic equation in?

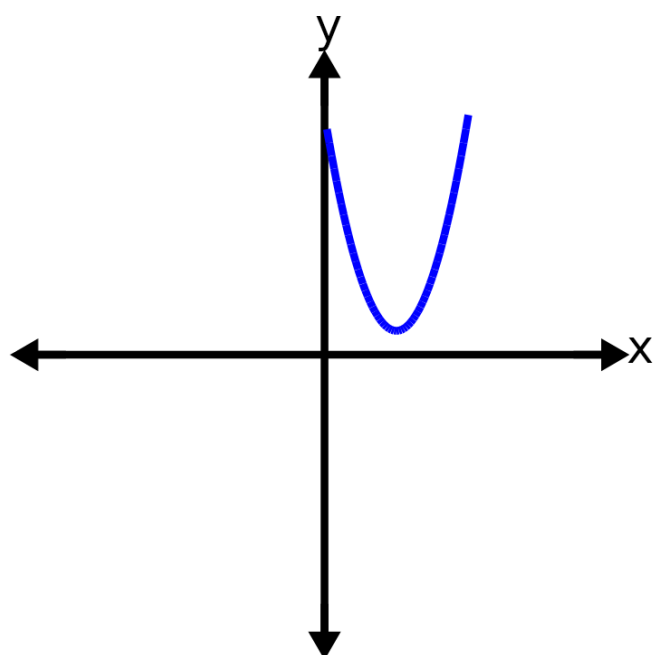
$$y = ax^2 + bx + c$$

A Factored Form

B Standard Form

C Vertex Form

15 What could the vertex of this function be?



A (3, -1)

B (-3, 1)

C (3, 1)

D (-3, -1)

16 What form is this quadratic equation in?

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

A Vertex Form

B Factored Form

C Standard Form

17 Which type of graph would this formula create?

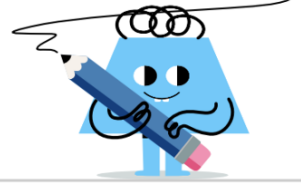
$$y = ax^2 + bx + c$$

A Trigonometric

B Quadratic

C Reciprocal

D Cubic

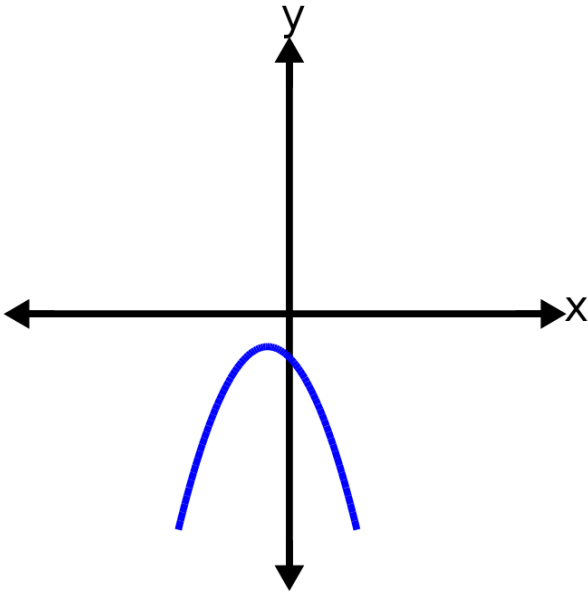


Quadratic Relations

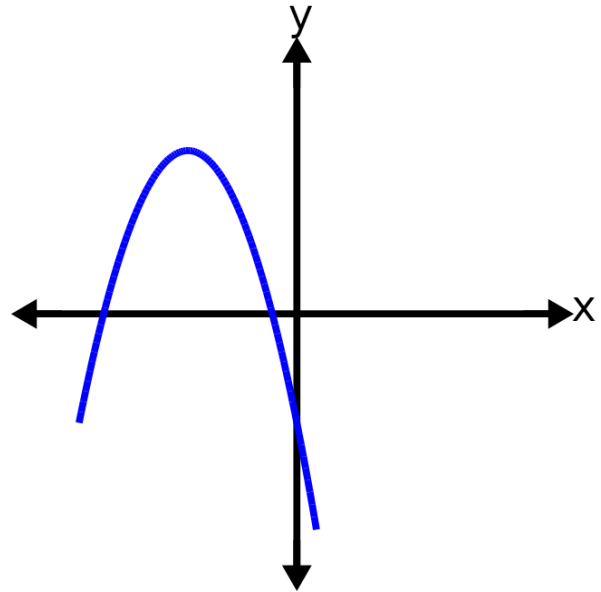
18 Which graph shows this quadratic equation?

$$y = -0.5x^2 - 5x - 5$$

A



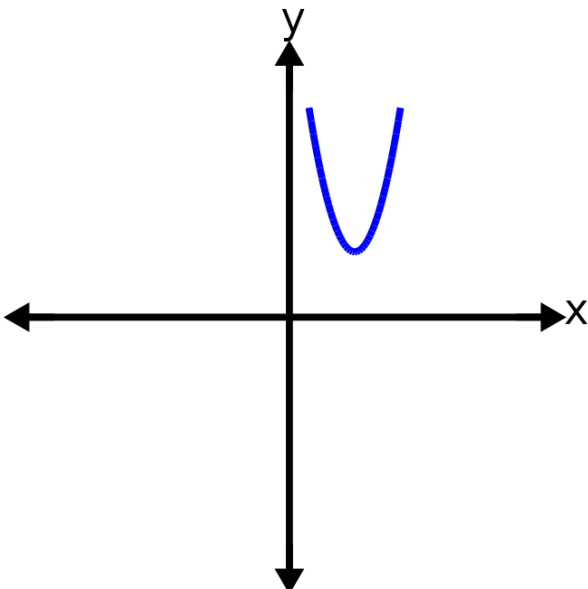
B



19 Which graph shows this quadratic function?

$$y = 1.5(x - 3)^2 - 3$$

A



B

