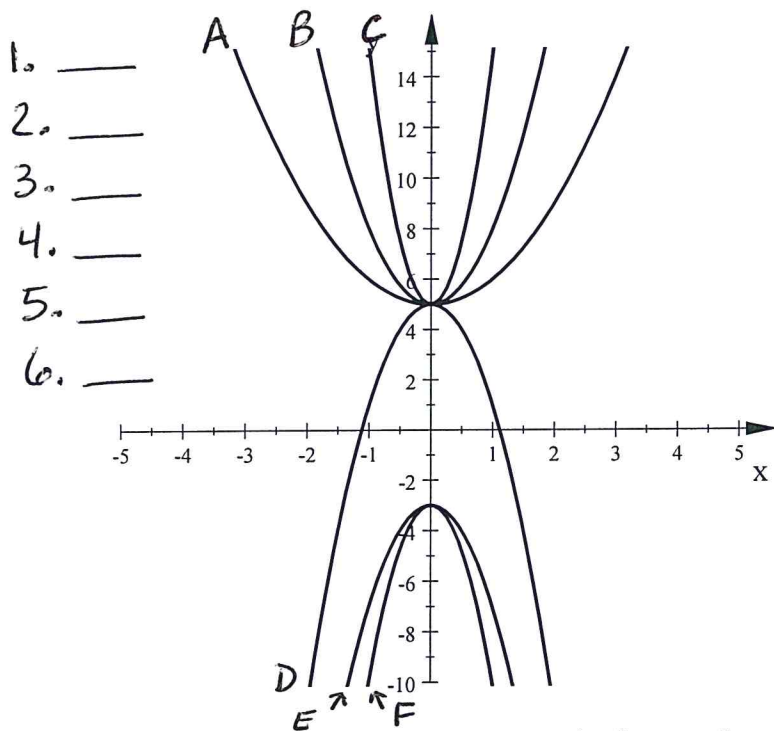


Match the graphs to their equations:

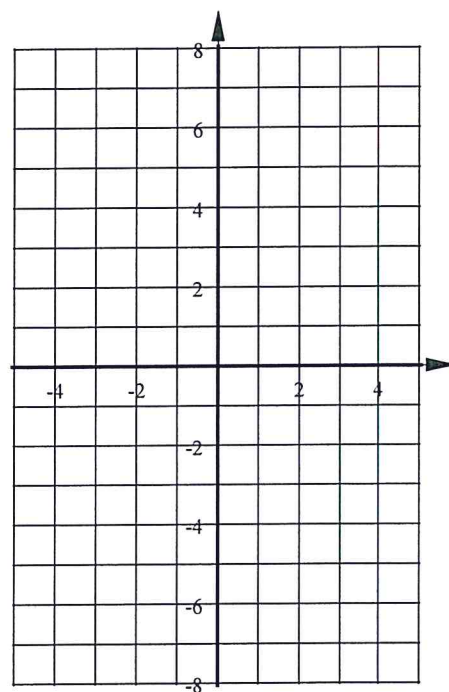
1. $y = 3x^2 + 5$ 2. $y = -4x^2 + 5$ 3. $y = -4x^2 - 3$
 4. $y = -7x^2 - 3$ 5. $y = x^2 + 5$ 6. $y = 10x^2 + 5$



1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____

7. Graph this quadratic function with at least five points.

$$y = -4x^2 + 8$$



8. Use the letter to place these quadratic equations in order from Narrowest to Widest.

- A. $y = 4x^2 - 10x + 7$ B. $y = -9x^2 + x - 16$ C. $y = -1.3x^2 + 8x - 12$
 D. $y = x^2 + 34x + 11$ E. $y = -5x^2 - 7$

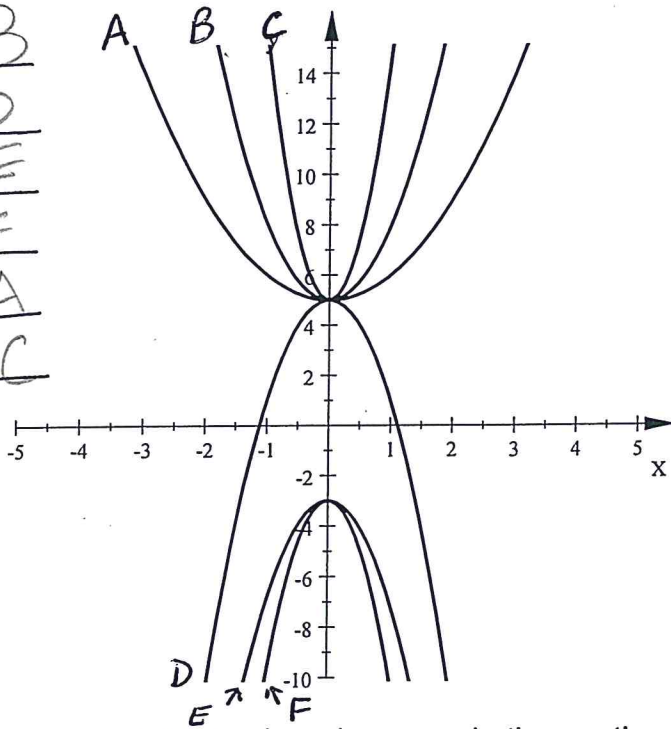
9. A ball is shot upward from the top of a 50 foot tall building with an initial velocity of 176 ft/s. The following quadratic equation models the height of the object (h) as a function of time (t):
 $h(t) = -16t^2 + 176t + 50$

- a) How high will the object be in 4 seconds?
 b) How high will the object be in 7 seconds?
 c) Explain how your answers to parts a and b are possible.
 d) When does the object reach its maximum height?
 e) What is the objects maximum height?

Match the graphs to their equations:

1. $y = 3x^2 + 5$ 2. $y = -4x^2 + 5$ 3. $y = -4x^2 - 3$
 4. $y = -7x^2 - 3$ 5. $y = x^2 + 5$ 6. $y = 10x^2 + 5$

1. B
 2. D
 3. E
 4. F
 5. A
 6. C

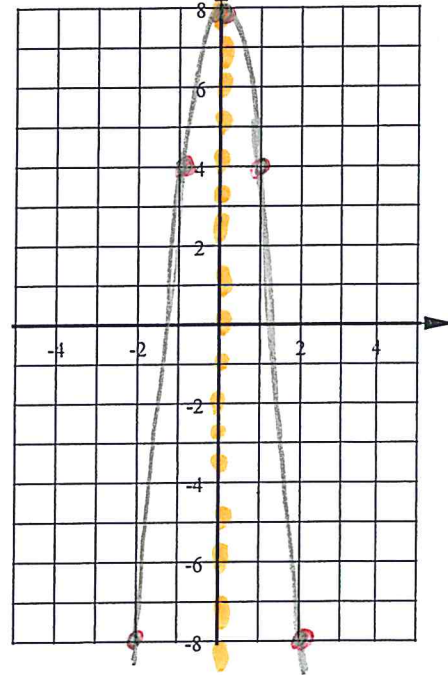


Answers

7. Graph this quadratic function with at least five points.

$y = -4x^2 + 8$

Vertex (0, 8)



X	Y
1	4
2	-8

8. Use the letter to place these quadratic equations in order from Narrowest to Widest.

A. $y = 4x^2 - 10x + 7$ B. $y = -9x^2 + x - 16$ C. $y = -1.3x^2 + 8x - 12$

D. $y = x^2 + 34x + 11$ E. $y = -5x^2 - 7$

B, E, A, C, D

9. A ball is shot upward from the top of a 50 foot tall building with an initial velocity of 176 ft/s. The following quadratic equation models the height of the object (h) as a function of time (t):

$h(t) = -16t^2 + 176t + 50$

a) How high will the object be in 4 seconds? 498 ft

$h(4) = -16(4)^2 + 176(4) + 50$

b) How high will the object be in 7 seconds? 498 ft

$h(7) = -16(7)^2 + 176(7) + 50$

c) Explain how your answers to parts a and b are possible.

It reaches this height twice, once on the way up & a 2nd time coming down

d) When does the object reach its maximum height?

half way between 4 & 7 sec 5.5 sec

e) What is the object's maximum height?

$h(5.5) = 534 \text{ ft}$

