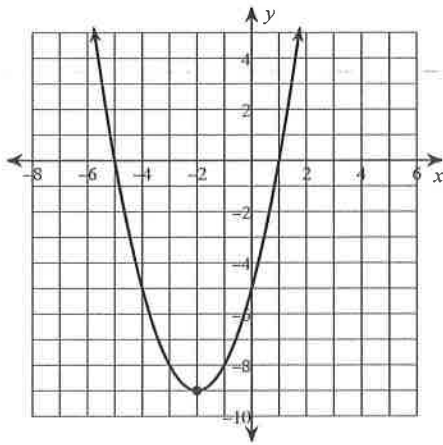


WS PC #1 Review

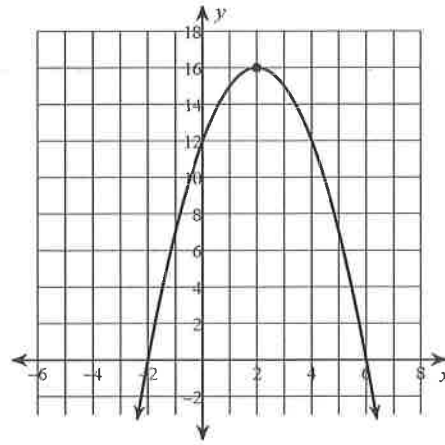
1) Find each part of the function:

- a) vertex:
- b) aos:
- c) y-intercept:
- d) maximum or minimum value:
- e) roots:
- f) domain:
- g) range:



2) Find each part of the function:

- a) vertex:
- b) aos:
- c) y-intercept:
- d) maximum or minimum value:
- e) roots:
- f) domain:
- g) range:



3) Find the vertex, roots and y-intercept. Then determine the domain and range.

$$y = x^2 + 8x + 15$$

vertex:

roots:

y-intercept:

domain:

range:

4) Find the vertex, roots and y-intercept. Then determine the domain and range.

$$y = x^2 - 14x + 48$$

vertex:

roots:

y-intercept:

domain:

range:

- 5) Find the vertex, roots and y-intercept.
Then determine the domain and range.

$$y = -(x + 5)(x - 5)$$

vertex:

roots:

y-intercept:

domain:

range:

- 6) Find the vertex, roots and y-intercept.
Then determine the domain and range.

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

vertex:

roots:

y-intercept:

domain:

range:

- 7) Find the vertex and y-intercept. Then find
the maximum or minimum value.

$$y = (x + 2)^2 - 5$$

vertex:

y-intercept:

max/min value:

domain:

range:

- 8) Find the vertex and y-intercept. Then find
the maximum or minimum value.

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

vertex:

y-intercept:

max/min value:

domain:

range:

9) The function $y = -16t^2 + 25$ represents the height y (in feet) of a pinecone t seconds after falling from a tree.

a) After how many seconds does the pinecone hit the ground?

b) How high is the pinecone after 0.5 seconds?

11) The function $h(t) = -16t^2 + 32t + 2$ models the height (in feet) of a softball t seconds after it is pitched in an underhand motion.

a) Describe the domain and range.

Domain:

Range:

b) What is the maximum height of the softball?

c) How long does it take the softball to reach its maximum height?

d) How high is the softball after 1 second?

10) The function $h(t) = -16t^2 + 16t$ represents the height (in feet) of a horse t seconds after it jumps during a steeplechase.

a) How long does it take to reach its maximum height?

b) Can the horse clear a fence that is 3.5 feet tall? If so, by how much?

12) The function $f(t) = -16t^2 + 88t + 12$ represents the height (in feet) of a pumpkin t seconds after it is launched from a catapult.

a) When does the pumpkin reach its maximum height?

b) What is the initial height of the pumpkin?

c) How high does the pumpkin go before returning to the ground?

Determine if each function is linear, quadratic or neither. Explain.

13.

x	1	2	3	4	5	6
y	2	17	13	9	5	1

14.

x	y
-3	6
-2	0
-1	-4
0	-6
1	-6
2	-4
3	0
4	6

15.

x	-2	-1	0	1	2
y	1	0	1	4	9

16.

x	y
0	1
1	4
2	7
4	13
5	16