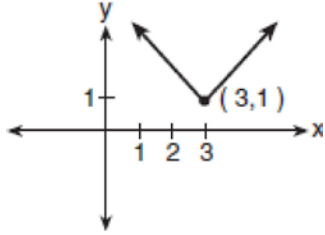
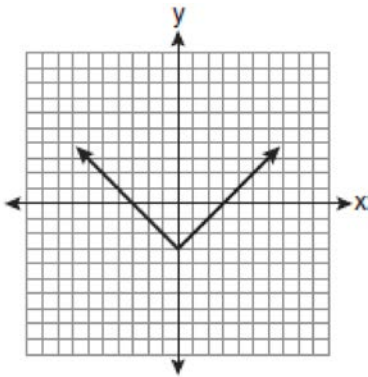


F.LE.A.2: Families of Functions 1b

- 1 Which equation is represented by the accompanying graph?



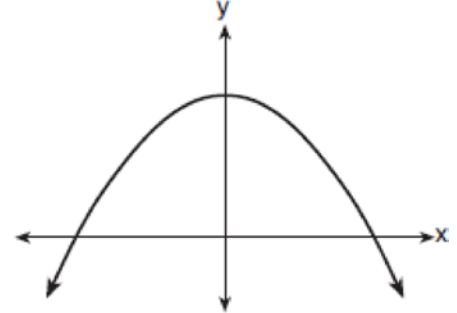
- 2 Which equation is represented by the graph below?



- 3 Which equation represents a quadratic function?

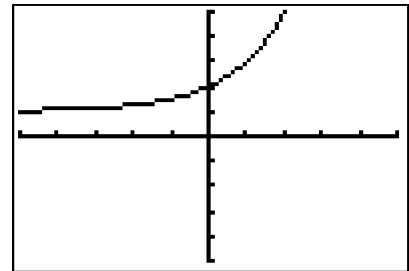
- 1) $y = x + 2$
- 2) $y = |x + 2|$
- 3) $y = x^2$
- 4) $y = 2^x$

- 4 Which equation is best represented by the accompanying graph?

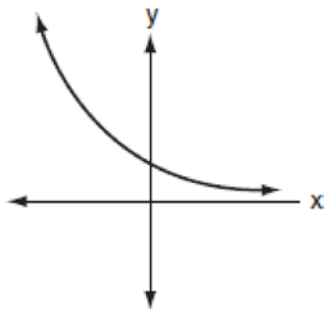


- 1) $y = 6^x$
- 2) $y = 6x^2$
- 3) $y = 6x + 1$
- 4) $y = -x^2 + 1$

- 5 The graph below can be represented by which equation?

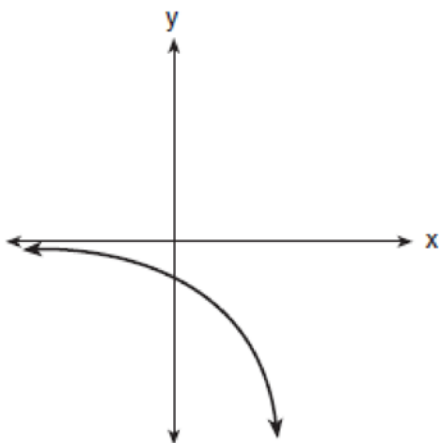


- 6 Which equation best represents the accompanying graph?



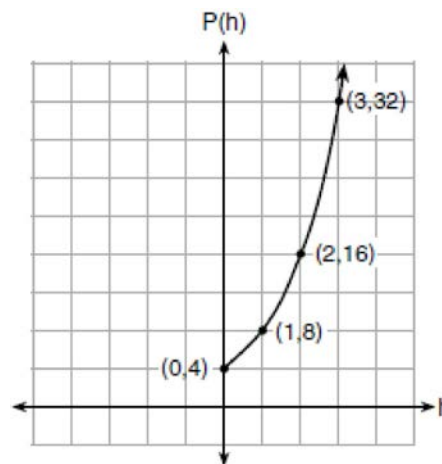
- 1) $y = 2^x$
- 2) $y = x^2 + 2$
- 3) $y = 2^{-x}$
- 4) $y = -2^x$

- 7 Which equation is represented by the accompanying graph?



- 1) $y = 2^x$
- 2) $y = -2^x$
- 3) $y = 2^{-x}$
- 4) $y = x^2 - 2$

- 8 Vinny collects population data, $P(h)$, about a specific strain of bacteria over time in hours, h , as shown in the graph below.



Which equation represents the graph of $P(h)$?

- 9 The table below represents the function F .

x	3	4	6	7	8
$F(x)$	9	17	65	129	257

The equation that represents this function is

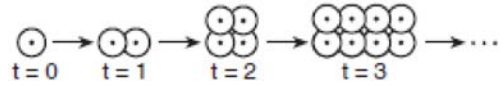
- 10 Which equation could represent the relationship between the x and y values shown in the accompanying table?

x	y
0	2
1	3
2	6
3	11
4	18

11 Which function is shown in the table below?

x	$f(x)$
-2	$\frac{1}{9}$
-1	$\frac{1}{3}$
0	1
1	3
2	9
3	27

15 The accompanying diagram represents the biological process of cell division.



If this process continues, which expression best represents the number of cells at any time, t ?

12 Which equation models the data in the accompanying table?

Time in hours, x	0	1	2	3	4	5	6
Population, y	5	10	20	40	80	160	320

13 A laboratory technician studied the population growth of a colony of bacteria. He recorded the number of bacteria every other day, as shown in the partial table below.

t (time, in days)	0	2	4
$f(t)$ (bacteria)	25	15,625	9,765,625

Which function would accurately model the technician's data?

14 If a population of 100 cells triples every hour, which function represents $p(t)$, the population after t hours?

F.LE.A.2: Families of Functions 1b
Answer Section

1 ANS:

$$y = |x - 3| + 1$$

REF: 060314b

2 ANS:

$$y = |x| - 3$$

REF: 080925ia

3 ANS: 3

REF: 081118ia

4 ANS: 4

REF: 060703b

5 ANS:

$$y = 2^x + 1$$

REF: fall9902b

6 ANS: 3

REF: 010701b

7 ANS: 2

REF: 080901b

8 ANS:

$$P(h) = 4(2)^h$$

REF: 061707ai

9 ANS:

$$F(x) = 2^x + 1$$

REF: 061415ai

10 ANS:

$$y = x^2 + 2$$

REF: 010113a

11 ANS:

$$f(x) = 3^x$$

REF: 011616ai

12 ANS:

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

REF: 060411b

13 ANS:

$$f(t) = 25^{t+1}$$

REF: 061513ai

14 ANS:

$$p(t) = 100(3)^t$$

REF: 081714ai

15 ANS:

$$2^t$$

REF: 060909b