**Domain: Functions 35%**

|  |  |
| --- | --- |
| 1.F.IF.73 –– 01–272 –1– | Which equation represent the graph of the exponential function given to the right? 1. $y=\frac{1}{2}^{x}+2$
2. $y=2^{x}+2$
3. $y=\frac{1}{2}^{x+2}$
4. $y=2^{x}-2$
 |
| 2.F.BF.1a | Which function represents the data in the table?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***x*** | 3 | 6 | 10 | 15 |
| ***y*** | 2 .5 | 4 | 6 | 8 .5 |

1. $f\left(x\right)=2x+1$ c. $f\left(x\right)=2x -1$
2. $f\left(x\right)= \frac{x}{2}-1 $d. $f\left(x\right)= \frac{x}{2}+1 $
 |
| 3. F.BF.3  |  Identify the vertex of the quadratic function $f\left(x\right)= (x+3)^{2}-4$.1. (3, -4) c. (-3, -4)
2. (3, 4) d. $\left(-4, -3\right)$
 |
| 4.F.LE.1a | Which scenario represents exponential growth?1. A kudzu vine grows 12 inches per day.
2. A candle melts at a rate of 2 mm per minute.
3. A population of flies doubles every five days.
4. A ball bounces half of its previous distance per bounce.
 |
| 5.F.LE.5  | Deborah's weekly salary can be modeled by the function *y* = 600*x* + 500, where *x* represents the number of cars that she sells in one week.Which describes the meaning of the slope in the equation?1. She makes $500 without selling any cars.
2. She makes $600 without selling any cars.
3. Deborah's salary increases $500 per car that she sells.
4. Deborah's salary increases $600 per car that she sells.
 |
| 6. F.IF.9 | The table and graph show two different functions. How does the maximum of *f(x)* compare from the maximum of *g(x)*? 1. *f(x)* has a maximum value of 9, while *g(x)* has a maximum value of 3.
2. *g(x)* has a maximum value of 10, while *f(x)* has a maximum value of 9.
3. *f(x)* has a maximum value of 6, while *g(x)* has a maximum value of 3
4. *g(x)* has a maximum value of 10, while *f(x)* has a maximum value of 6.
 |
| 7. F.BF.2  | Which of the following attribute describes the sequence: 24, 16, 8, 0? 1. The sequence is a discrete linear function
2. The sequence is a continuous linear function
3. The sequence is a discrete exponential function
4. The sequence is a continuous exponential function
 |
| 8.F.BF.2  | Which of the following explicit formula describes the sequence: 24, 16, 8, 0? 1. $A\_{n}=8n+32$
2. $A\_{n}=-8n+32$
3. $A\_{n}=24(-8)^{n-1}$
4. $A\_{n}=24(8)^{n-1}$

  |
| 9.F.IF.5 | Kiara was driving to visit her grandmother. The graph models her trip * x represents the time she traveled in hours
* y represents the distance she traveled

What is the reasonable domain for the graph? 1. $x\leq 3$
2. $y\leq 19$
3. $0\leq x\leq 3$
4. $0\leq y\leq 195$
 |
| 10.F.LE.2 | Consider the graph to the right 1. $y=\left(x-2\right)^{2}-1$
2. $y=-\left(x+2\right)^{2}+1$
3. $y=\left(x+2\right)^{2}-1$
4. $y=-(x-2)^{2}+1$
 |
| 11. F.IF.6  | Consider the graph of the exponential function What is the average rate of change for the function over the interval [1,4].1. $\frac{-14}{3}$
2. $\frac{14}{3}$
3. $\frac{3}{14}$
4. $\frac{-3}{14}$
 |