



Puzzle Time

How Do You Find A Train?

Write the letter of each answer in the box containing the exercise number.

Determine whether the equation represents an exponential function.

1. $y = 2(15)^x$ 2. $y = 6(-11)^x$

3.

x	-2	-1	0	1	2
y	1	5	25	125	625

4.

x	7	8	9	10	11
y	2	6	10	14	18

Evaluate the function for the given value of x .

5. $y = 4^x; x = -2$ 6. $y = 3(5)^x; x = 2$

7. $y = -7(2)^x; x = -5$ 8. $f(x) = 0.25^x; x = -4$

9. $f(x) = -\frac{1}{6}(6)^x; x = 3$ 10. $y = \frac{1}{9}(27)^x; x = \frac{2}{3}$

Describe the domain and range of the function.

11. $f(x) = 2^x + 3$ 12. $f(x) = 5^{x-4}$

13. $y = -\left(\frac{1}{6}\right)^x - 8$ 14. $y = 9^{x+1} - 1$

15. The function $y = 3(2)^x$ represents the population of bees in the bee hive, where x represents the number of days. How many bees are in the bee hive after 4 days?

5	11	3	1	14	9		15	7	4		10	13	8	6	12	2
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Answers

- S. no
- L. yes
- W. -36
- T. $-\frac{7}{32}$
- I. 48
- F. $\frac{1}{16}$
- A. 256
- T. 1
- C. 75
- O. all real numbers; $y > -1$
- R. all real numbers; $y < -8$
- K. all real numbers; $y > 0$
- O. all real numbers; $y > 3$