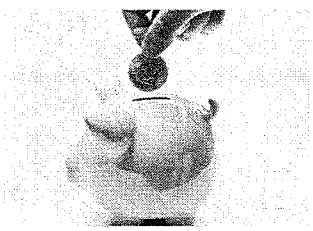
Name: Linear and Exponential Functions | 4.1

Ready, Set, Go!



www.flickr.com/photos/teegardin

Ready

Topic: Recognizing arithmetic and geometric sequences

Predict the next 2 terms in the sequence. State whether the sequence is arithmetic, geometric, or neither. Justify your answer.

1. 4 , -20 , 100 , -500 , . . .

2. 3 , 5 , 8 , 12 , . . .

3. 64 , 48 , 36 , 27 , . . .

4. 1.5 , 0.75 , 0 , -0.75 , . . .

5. 40 , 10 , $\frac{5}{2}$, $\frac{5}{8}$, ...

6. 1, 11, 111, 1111, . . .

7. -3.6, -5.4, -8.1, -12.15, . . .

8. -64, -47, -30, -13, . . .

9. Create a predictable sequence of at least 4 numbers that is NOT arithmetic or geometric.

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Set

Topic: Discrete and continuous relationships

Identify whether the following statements represent a *discrete* or a *continuous* relationship.

10. The hair on your head grows ½ inch per month.

11. For every ton of paper that is recycled, 17 trees are saved.

12. Approximately 3.24 billion gallons of water flow over Niagara Falls daily.

13. The average person laughs 15 times per day.

14. The city of Buenos Aires adds 6,000 tons of trash to its landfills every day.

15. During the Great Depression, stock market prices fell 75%.

Go

Topic: Slopes of lines

Determine the slope of the line that passes through the following points.

16. (-15 , 9) , (-10 , 4)

17. (0.5 , 4) , (3 , 3.5)

18. (50 , 85) , (60 , 80)

19.

x	y
-5	-20
-4	-17
-3	-14

20.

x	y
-1	-1
0	½
1	2

21.

x	y
-5	33
0	30
5	27

Need Help? Check out these related videos and internet sites:

Discrete vs. continuous: http://www.mathsisfun.com/data/data-discrete-continuous.html

Arithmetic and geometric sequences: http://home.windstream.net/okrebs/page131.html

Slope: http://www.khanacademy.org/math/algebra/linear-equations-and-inequalitie/v/slope-of-a-line

Linear relationships: http://www.mathsteacher.com.au/year7/ch15_linear/04_modelling/linear.htm