# Ready, Set, Go!



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## Ready

Topic: Evaluating equations

### Fill out the table of values for the given equations.

1. 
$$y = 17x - 28$$

х	у
-3	
1	
4	
5	

2. 
$$y = -8x - 3$$

3. 
$$y = \frac{1}{2}x + 15$$

X	у
-26	
-14	
-1	
9	

4. 
$$y = 6^x$$

х	у
-3	
-1	
1	
2	
5	

5. 
$$y = 10^x$$

x	у
-3	
-1	
0	
2	
6	

$$6. y = \left(\frac{1}{5}\right)^x$$

Х	у
-4	
-2	
0	
3	
5	

#### Set

Topic: Evaluate using the formulas for simple interest or compound interest.

Given the formula for simple interest: i = Prt, calculate the simple interest paid.

(Remember, i = interest, P = the principal, r = the interest rate per year as a decimal, <math>t = time in years)

- 7. Find the simple interest you will pay on a 5 year loan of \$7,000 at 11% per year.
- 8. How much interest will you pay in 2 years on a loan of \$1500 at 4.5% per year?

Use i = Prt to complete the table. All interest rates are annual.

	i	= <i>P</i>	× r	× t
9.		\$11,275	12%	3 years
10.	\$1428	\$5100	4%	
11.	\$93.75	\$1250		6 months
12.	\$54		8%	9 months

Given the formula for compound interest:  $A = P(1 + r)^t$ , write a compound interest function to model each situation. Then calculate the balance after the given number of years.

(Remember:  $A = the \ balance \ after \ t \ years, \ P = the \ principal, \ t = the \ time \ in \ years, \ r = the \ annual \ interest \ rate \ expressed \ as \ a \ decimal)$ 

- 13. \$22,000 invested at a rate of 3.5% compounded annually for 6 years.
- 14. \$4300 invested at a rate of 2.8% compounded annually for 15 years.
- 15. Suppose that when you are 15 years old, a magic genie gives you the choice of investing \$10,000 at a rate of 7% or \$5,000 at a rate of 12%. Either choice will be compounded annually. The money will be yours when you are 65 years old. Which investment would be the best? Justify your answer.

#### Go

Topic: Using order of operations when evaluating equations

Evaluate the equations for the given values of the variables.

16. 
$$pq \div 6 + 10$$
; when  $p = 7$  and  $q = -3$ 

17. 
$$m + n(m - n)$$
; when  $m = 2$ , and  $n = 6$ 

18. 
$$(b-1)^2 + ba^2$$
; when  $a = 5$ , and  $b = 3$ 

19. 
$$y(x - (9 - 4y))$$
; when  $x = 4$ , and  $y = -5$ 

20. 
$$x - (x - (x - y^3))$$
; when  $x = 7$ , and  $y = 2$ 

21. 
$$an^4 + a(n-7)^2 + 2n$$
; when  $a = -2$ , and  $n = 4$ 

Need Help? Check out these related videos:

http://www.basic-mathematics.com/simple-vs-compound-interest.html

http://www.khanacademy.org/finance-economics/core-finance/v/introduction-to-interest