

**Algebra A**  
**Chapter 5, Lesson 9: Do Now**

**Name:** \_\_\_\_\_

**Common Mistake #1:** Evaluating with exponents.

**Note:** According to *PEMDAS*, you must do exponents *FIRST*, and then multiply.

Evaluate $5x^2$ if $x = 2$ .	Evaluate $5x^2$ if $x = -3$ .	Evaluate $2x^3$ if $x = 5$ .
Evaluate $10x^2$ if $x = -4$ .	Evaluate $-3x^2$ if $x = 6$ .	Evaluate $-2x^2$ if $x = -5$ .

**Common Mistake #2:** Completing an equation when the answer is a fraction.

**Solve for  $x$ .** Be careful in that last step!

$3x + 5 = 11$	$6x + 5 = 8$	$4x - 7 = 5$
$12x - 7 = -3$	$8 - 10x = 6$	$8 - 2x = -2$

**Common Mistake #3:** Working through a perimeter problem.

The lengths of the sides of a triangle are  $5x - 2$ ,  $3x + 4$ , and 12. If the perimeter is 46 find the value of  $x$ .

# Graphing Situations

## Basic Level

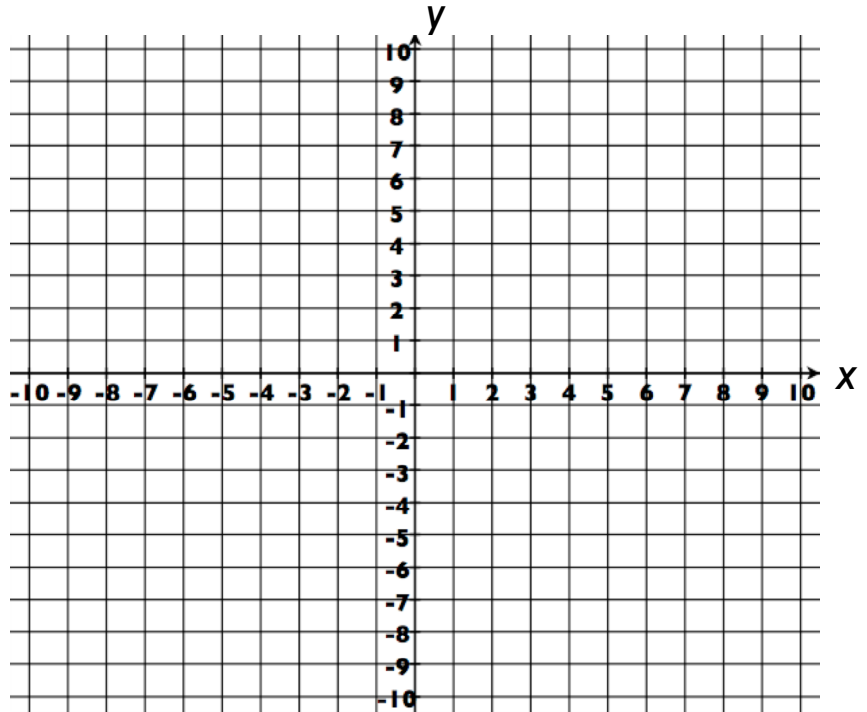
Complete the data tables and graph each equation. Label each line with its equation.

$$y = 5 - x$$

x	y
-2	
-1	
0	
1	
2	

$$y = 2x - 4$$

x	y
-2	
-1	
0	
1	
2	



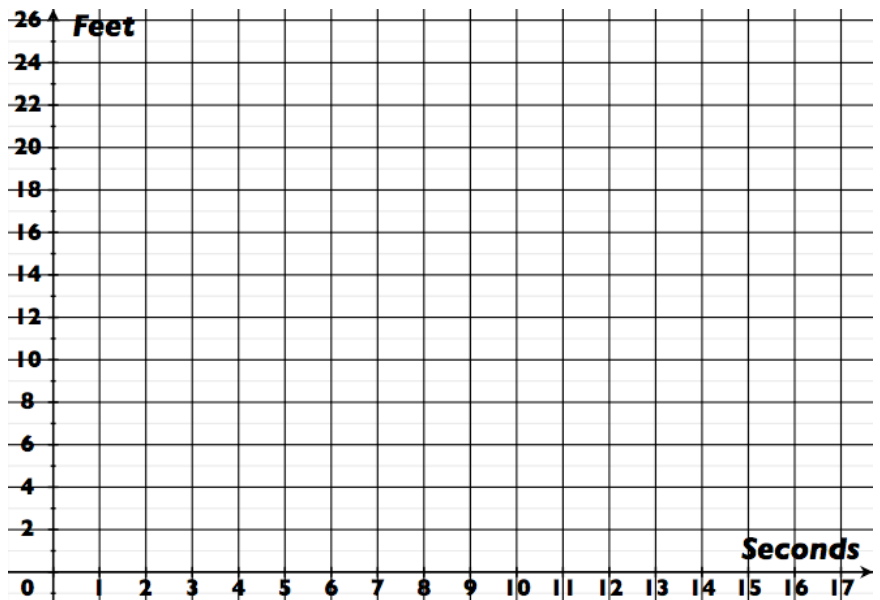
The Tortoise and Hare are at it again! This time, the Tortoise got a head start – he began the race 4 feet from the starting line. He ran at a rate of 3 feet per second (that’s a fast Tortoise!).

Write an equation:

$$F = \underline{\quad} + \underline{\quad}$$

Make a data table:

S	F
0	
1	
2	
3	
4	
5	



How far will the Tortoise be after: **8 seconds?**

**16 seconds?**

**45 seconds?**

## Proficient Level

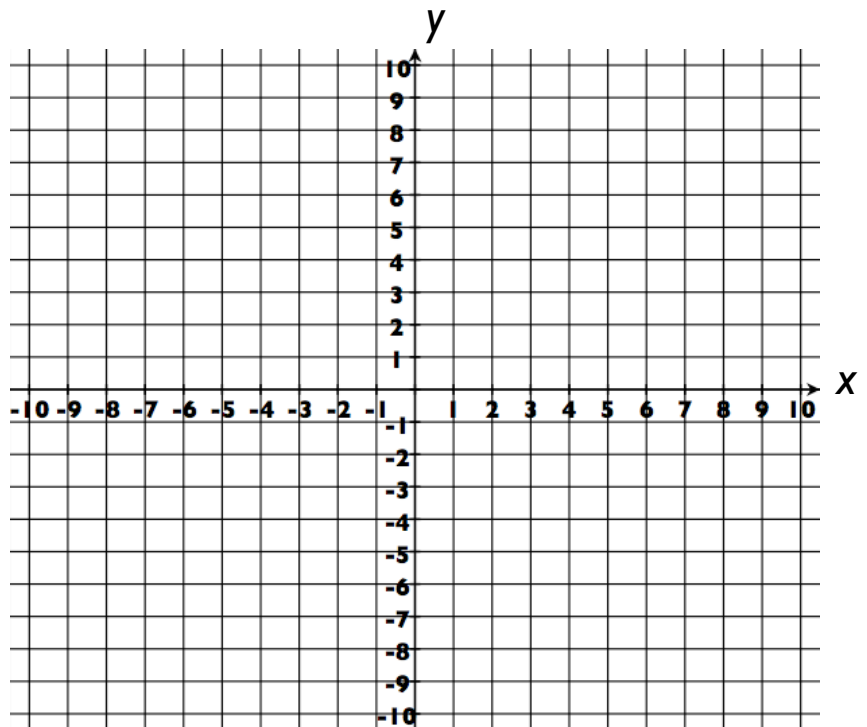
Complete the data tables and graph each equation. Label each line with its equation.

$$y = 7 - 2x$$

x	y
-2	
-1	
0	
1	
2	

$$y = \frac{3}{4}x - 6$$

x	y
-2	
-1	
0	
1	
2	



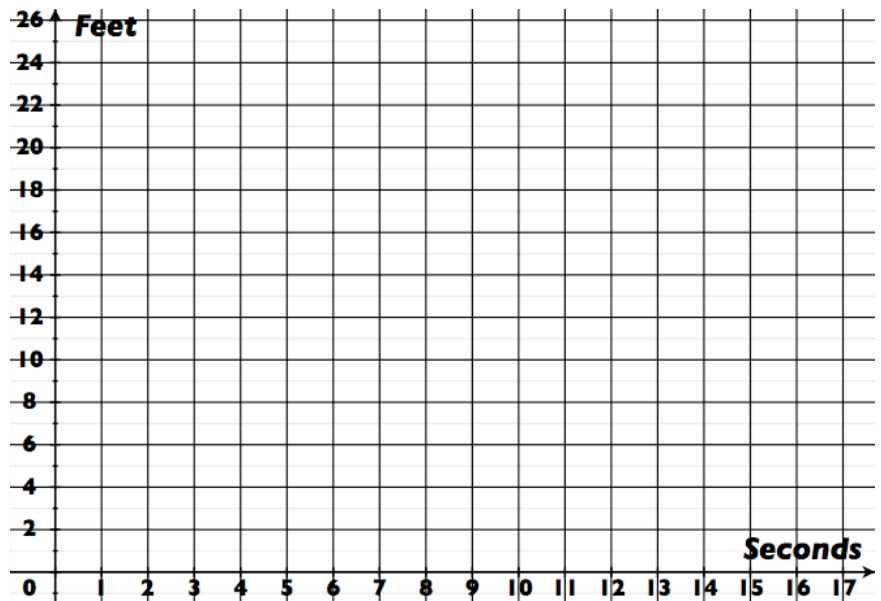
In another rematch, the Tortoise got a head start – he began the race 8 feet from the starting line. He was running slow, though - only  $\frac{1}{2}$  foot per second.

**Write an equation:**

**F =**

**Make a data table:**

S	F
0	
1	
2	
3	
4	
5	



How far will the Tortoise be after: **16 seconds?**

**80 seconds?**

**103 seconds?**

## Advanced Level

For the final rematch, the Tortoise started 9 feet from the starting line, and ran at a rate of  $\frac{3}{4}$  of a foot per second. The Hare started at the starting line, and ran at a rate of 3 feet per second.

**Write an equation for the Tortoise:**

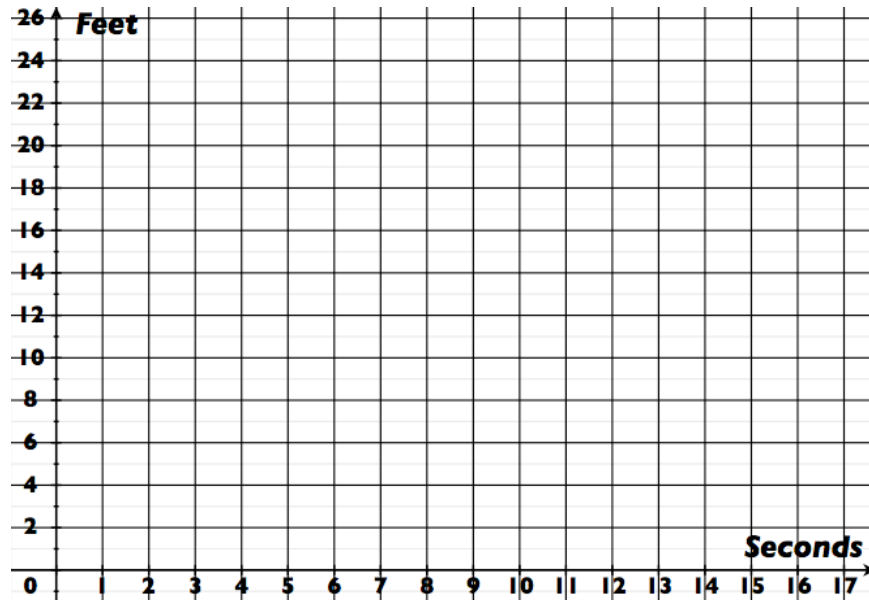
**Write an equation for the Hare:**

**Make a data table for each:**

S	F
0	
1	
2	
3	
4	
5	
6	

S	F
0	
1	
2	
3	
4	
5	
6	

**Graph the race:**



**Answer the questions:**

1. How far will each animal be after 48 seconds?
2. At what time does the Hare pass the Tortoise? How far from the starting line are they?
3. At the 12-second mark, how far ahead of the Tortoise is the Hare?