Alg 1H Homework   Name _____

December, 2018   Per ____ Date _____
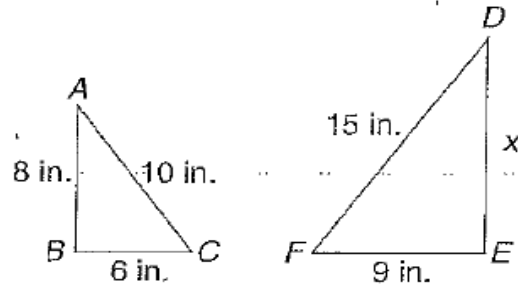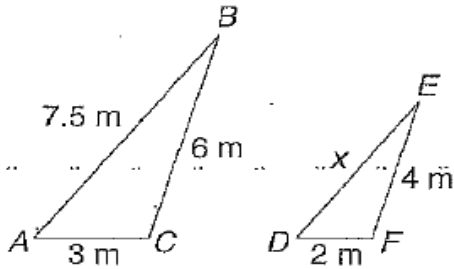
Monday – 12/17

1. Find the unit rate.
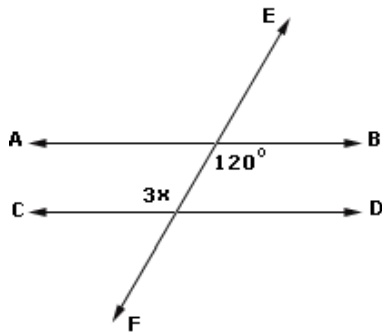   **a.** $6.74 for 8 ounces   **b.** 450 miles in 4 hours   **c.** –25 dollars in 4 hours
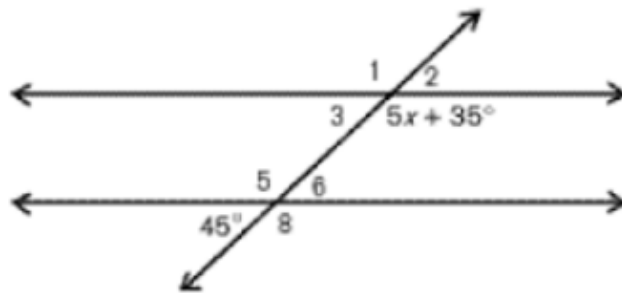
2. The triangles are similar. Find the missing sides!

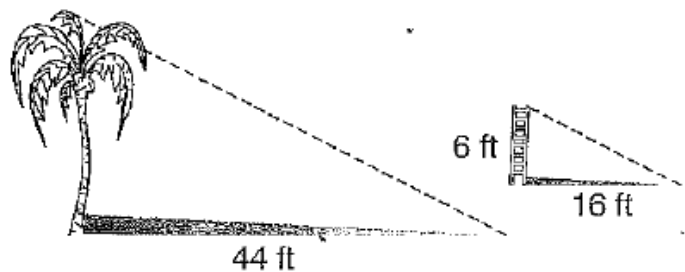Find the value of x and the measure of the missing angles.
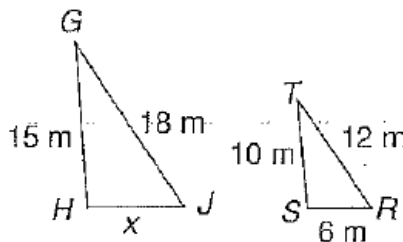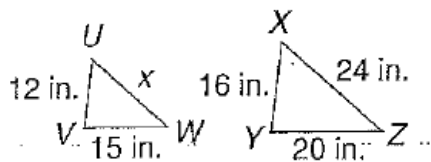
3.

4.

5. There are 25 shirts in your drawer. All of them are white except for 7. What is the probability of pulling out a white T-shirt?

6. A palm tree casts a shadow that is 44 feet long. A 6-foot ladder casts a shadow that is 16 feet long. Use Estimate the height of the palm tree.

Tuesday – 12/18

1. Find the missing sides of the similar triangles:
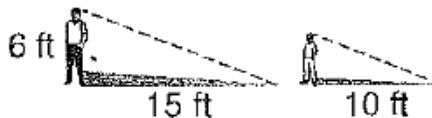

2. How can you make each expression equal to 9? (hint: you can use parentheses):

a. $27 \div 3 \cdot 9 + 8$

b. $11 - 12 - 10$

3.

A 6-foot-tall adult casts a shadow that is 15 feet long. Estimate the height of a child who casts a 10-foot shadow.

4. Solve:

a. $-2(4x + 8) - 12 = -(8x + 4)$

b. $\dfrac{3}{4}x + \dfrac{5}{6} = -\dfrac{1}{6}$

5. Simplify:

a. $7\dfrac{3}{4} - 5\dfrac{2}{3}$

b. $2\dfrac{1}{4} \cdot \dfrac{5}{6}$

c. $\dfrac{3}{8} \div 1\dfrac{1}{2}$

6. Find the value of x.

a. $\dfrac{30}{x} = \dfrac{1500}{400}$

b. $\dfrac{25}{10} = \dfrac{10{,}000}{x}$

Wednesday – 12/19

1. Using the digits **1 to 9**, at most **one time each**, fill in the blanks to make two different pairs of fractions that have a product of 2/3. Hint: think of fractions that are equivalent to 2/3.
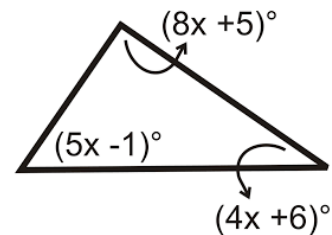
$$\frac{\square}{\square} \bullet \frac{\square}{\square} = \frac{2}{3} \qquad\qquad \frac{\square}{\square} \bullet \frac{\square}{\square} = \frac{2}{3}$$

2. Your mom gave you $55 to start a savings account. You save $60 each month so you can buy a new laptop. If the laptop costs $750 in how many months will you have enough money saved to buy it? Write an equation and solve it. Tell what your variable in the equation represents.
Let x =_____

3.   Find the value of x and then find the measure of each angle of the triangle.
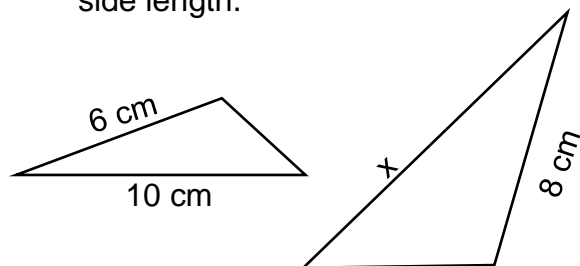
$(8x +5)°$

$(5x -1)°$

$(4x +6)°$

4. Reflect the figure over the *y*-axis then translate
(x, y) ⟶ (x + 3, y + 4)
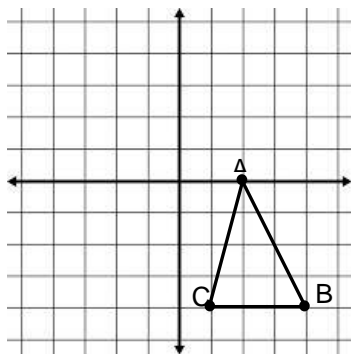
2nd Image Coordinates:
A": (,   ) B": (,   ) C": (,   )

5. The triangles are similar. Find the missing side length.

6 cm

10 cm

x

8 cm

6. Find the value of each missing angle.

92°
1
3
2 123°
4
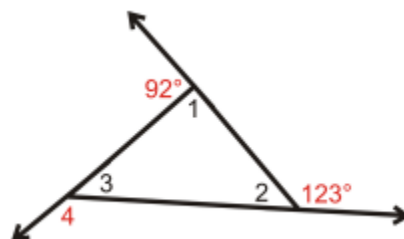
Thursday – 12/20

1. Simplify the expressions:
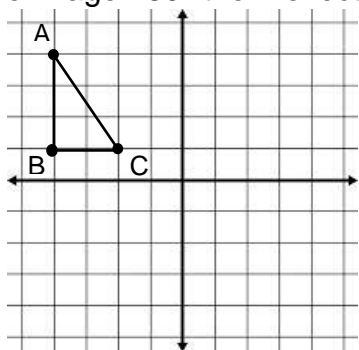a. $-3x^2 + 4y - x^2 + 7xy - 6y + 18 - xy$

b. $-(3x - 5y) + 3(-2x - 3y)$

2. Solve:
a. $3x + 4 = \frac{1}{2}(4x + 20)$

b. $5x + 3x + 4 = 4x - 3 + 4x$

3. Rotate the image 180° then reflect over x-axis,

2nd Image Coordinates:
A": (,   ) B": (,   ) C": (,   )

4. Using the digits 1 to 9, one time each, fill in the blanks to make a difference that is as close to 329 as possible.

___ ___ ___ − ___ ___ ___ = ___ ___ ___

How close did you get??

5. Solve:
a. $\dfrac{x}{6} - 7 = -5$

b. $2x + 9 - 4x = -(2x - 3) - 4$

6. Reflect ABC over the x-axis, then rotate the figure 180° and label the image.

2nd Image Coordinates:
A" (,   ) B" (,   ) C" (,   )