

## CH 3 #5-10

Monday, October 15, 2018 9:52 AM

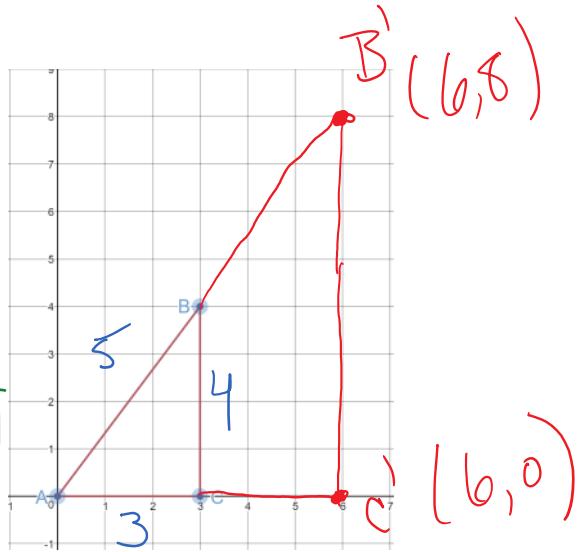
- 3-5. Plot triangle  $\triangle ABC$  formed with the points  $A(0, 0)$ ,  $B(3, 4)$ , and  $C(3, 0)$ , on graph paper. Use the method used in problem 3-2 to enlarge it from the origin by a factor of 2 (using two "rubber bands"). Label this new triangle  $\triangle A'B'C'$ . [3-5 HW eTool \(Desmos\)](#) [Homework Help](#)

a. What are the side lengths of the original triangle,  $\triangle ABC$ ?b. What are the side lengths of the enlarged triangle,  $\triangle A'B'C'$ ?c. Find the area and the perimeter of  $\triangle A'B'C'$ .

a.)  $3, 4, 5$   
 $3^2 + 4^2 = x^2$   
 $9 + 16 = x^2$   
 $25 = x^2$   
 $x = 5$

b.)  $6, 8, 10$   
 $6^2 + 8^2 = x^2$   
 $36 + 64 = x^2$   
 $100 = x^2$   
 $x = 10$

c.)  $P = 6 + 10 + 8 = 24$   
 $A = \frac{1}{2} b \cdot h = \frac{1}{2} (6)(8) = 24$



- 3-6. Solve each equation below for  $x$ . Show all work and check your answer by substituting it back into the equation and verifying that it makes the equation true.

a.  $\frac{x}{3} = 6$

b.  $\frac{5x+9}{2} = 12$

c.  $\frac{x}{4} = \frac{9}{6}$

d.  $\frac{5}{x} = \frac{20}{8}$

a.)  $3\left(\frac{x}{3}\right) = (6)3$        $x = 18$

b.)  $2\left(\frac{5x+9}{2}\right) = (12)2$

$$\begin{array}{rcl} 5x + 9 & = & 24 \\ -9 & & -9 \\ \hline 5x & = & 15 \end{array}$$

$$\frac{5x}{x} = \frac{15}{5}$$

$$x = 3$$

c.)  $\frac{x}{4} = \frac{9}{6}$

$$4(9) = 6 \cdot x$$

$$\frac{36}{6} = \frac{6x}{6}$$

$$x = 6$$

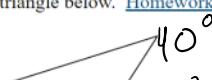
$$\frac{5}{x} = \frac{20}{8}$$

$$20x = 5(8)$$

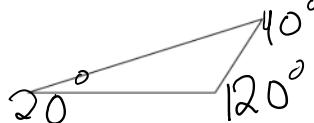
$$\frac{20x}{20} = \frac{40}{20}$$

$$x = 2$$

- 3-7. Examine the triangle below. [Homework Help](#)



- 3-7. Examine the triangle below. [Homework Help](#)



a. Estimate the measure of each angle of the triangle above.

*Scalene A*

b. Given only its shape, what is the best name for this triangle?

- 3-8. On graph paper, graph  $\overline{MU}$  if  $M(-1, 1)$  and  $U(4, 5)$ . [3-8 HW eTool](#) (Desmos) [Homework Help](#)

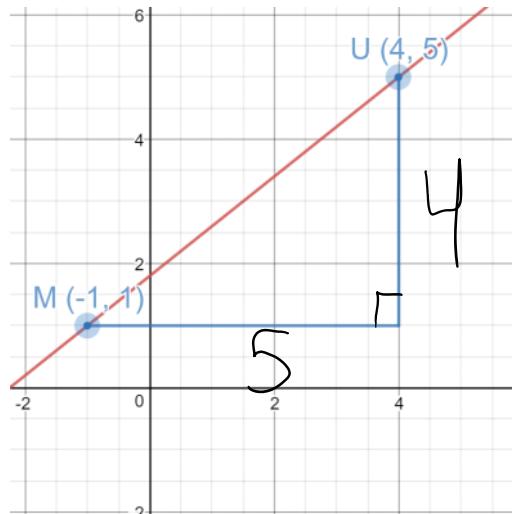
a. Find the slope of  $\overline{MU}$  and write an equation for the line.  $m = 4/5$

b. Find  $MU$  (the distance from  $M$  to  $U$ ).

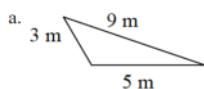
c. Are there any similarities to the calculations used in parts (a) and (b)? Any differences?

$$\begin{aligned} b \quad & 4^2 + 5^2 = x^2 \\ & \sqrt{41} = \sqrt{x^2} \\ & x = 6.4 \end{aligned}$$

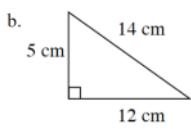
C.) You use the  
Same #'s  
Slope  $\rightarrow$  Fraction  
Distance  $\rightarrow$  pyth thm



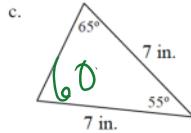
- 3-9. Examine each diagram below. Identify the error in each diagram.



*3 + 5 is not greater than 9.*



$5^2 + 12^2 = 14^2$ ? Not right Δ.  
 $25 + 144 \neq 196$

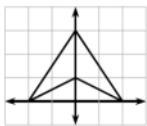
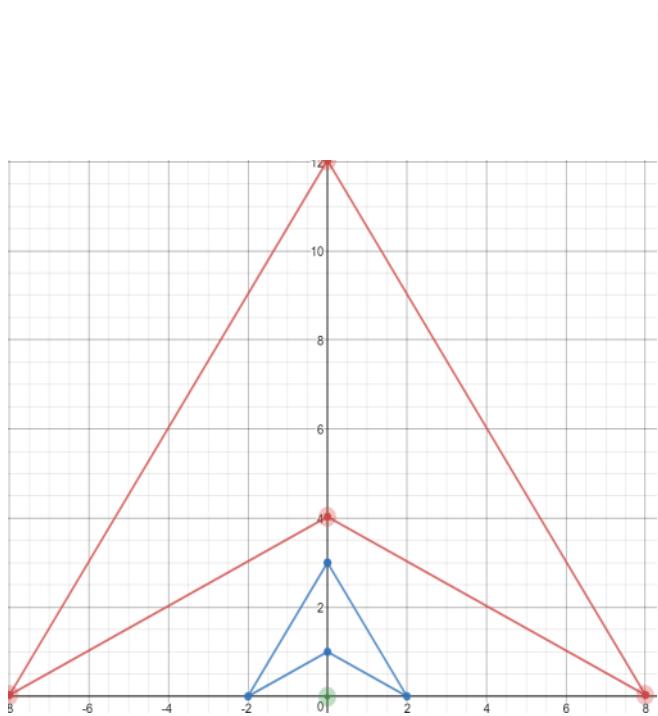


*2 L's should be =.*

## CH3 #18-22

Monday, October 15, 2018 9:08 PM

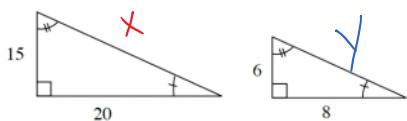
- 3-18. Use the method from problem 3-2 to enlarge the shape below from the origin by a zoom factor of 4.



$$\begin{aligned}(-2, 0) &\rightarrow (-8, 0) \\(0, 1) &\rightarrow (0, 4) \\(2, 0) &\rightarrow (4, 0) \\(0, 3) &\rightarrow (0, 12)\end{aligned}$$

- 3-19. The ratios Casey wrote from part (a) of problem 3-15 are common ratios between **corresponding sides** of the two shapes. That is, they are ratios between the matching sides of two shapes. [Homework Help](#)

a. Look at the two similar shapes below. Which sides correspond? Write common ratios with the names of sides and lengths.



Big  
Small  $\frac{15}{6} = 2.5 \quad \frac{20}{8} = 2.5$

b. Find the hypotenuse of each triangle above. Is the ratio of the hypotenuses equal to the ratios you found in part (a)?

$$\begin{aligned}15^2 + 20^2 &= x^2 \\225 &= x^2 \\x &= 25\end{aligned}$$

$$\begin{aligned}6^2 + 8^2 &= y^2 \\100 &= y^2 \\y &= 10\end{aligned}$$

$$\frac{25}{10} = 2.5 \quad \text{Yes!}$$

225

- 3-20. Are the lines represented by the equations below parallel? Support your reasoning with convincing evidence.

$$\begin{aligned}y &= -\frac{3}{5}x + 2 \\y &= -\frac{3}{5}x - 3\end{aligned}$$

Yes, Same Slopes  
+ different y-int.

- 3-21. Multiply the expressions below. Then simplify if possible. [Homework Help](#)

a.  $2x(3x - 4)$

a.)  $6x^2 - 8x$

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

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

c.  $(2x + 5)(2x - 5)$

$$\begin{aligned}2x^2 - 5x + 6x - 15 \\2x^2 + x - 15\end{aligned}$$

$$\begin{aligned}(2x^2 + x)(x - 3) \\2x^3 - 6x^2 + x^2 - 3x \\2x^3 - 5x^2 - 3x\end{aligned}$$

c.)  $(2x+5)(2x-5)$   
 $4x^2 - 10x + 10x - 25$   
 $4x^2 - 25$

$$2x^3 - 5x^2 - 3x$$

$$2x^2 + x - 15$$

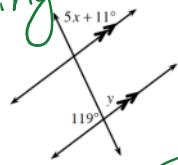
$$4x^2 - 10x + 10$$

$$4x^2 - 25$$

3-22. Examine the relationships in the diagram below. Then solve for  $x$  and  $y$ , if possible. Justify your work using angle relationships.

$$\begin{aligned} 5x + 11 &= 61 \\ -11 &\quad -11 \\ 5x &= 50 \\ \cancel{5} &\quad \cancel{5} \\ x &= 10 \end{aligned}$$

\*corresponding



$$\begin{aligned} 180 &- 119 \\ &= 61^\circ \rightarrow \text{Straight} \end{aligned}$$

### CH3 #29-34

Monday, October 15, 2018 9:22 PM

- 3-29. Rakisha is puzzled. She is working with the parallelogram drawn at right and wants to make it smaller instead of bigger. [Homework Help](#)

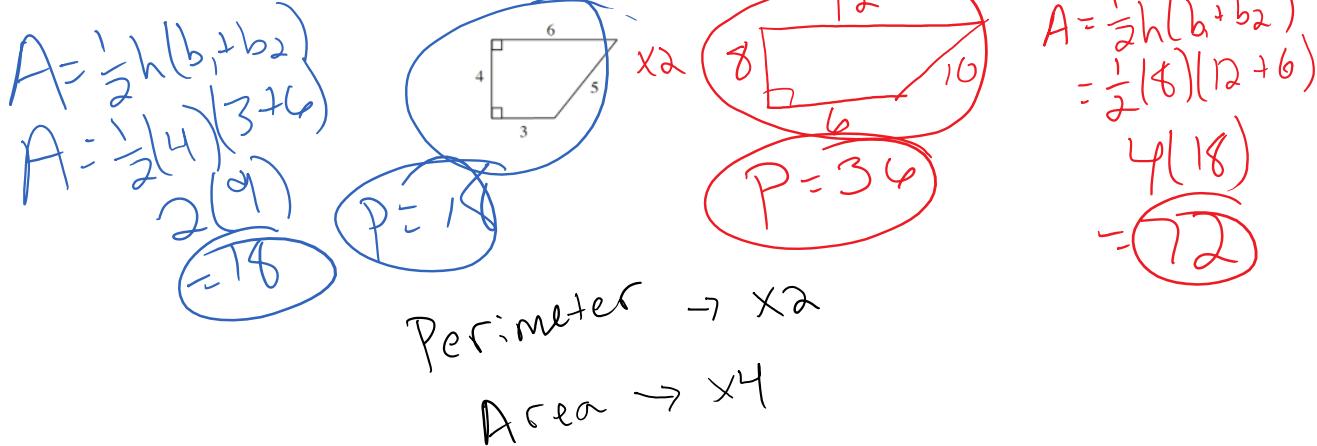


- a. What should she do if she wants the sides of her new figure to be *half as long* as the original sides? What ~~zoom factor~~ should she use? Find the dimensions of her new figure.  $\frac{1}{2}$  or multiply by  $\frac{1}{2}$

- b. While drawing some other shapes, Rakisha ended up with a shape congruent to the original parallelogram. What is the common ratio between pairs of corresponding sides?

1

- 3-30. Enlarge the shape at right on graph paper using a zoom factor of 2. Then find the perimeter and area of both shapes. What do you notice when you compare the perimeters? The areas? [3-30 HW eTool \(Desmos\)](#) [Homework Help](#)



- 3-31. Solve each equation below. Show all work and check your answer.

a.  $\frac{14}{5} = \frac{x}{3}$

a.)  $\frac{14}{5} = \frac{x}{3}$

b.  $\frac{10}{m} = \frac{5}{11}$

b.)  $\frac{10}{m} = \frac{5}{11}$

c.  $\frac{t-2}{12} = \frac{7}{8}$

c.)  $\frac{t-2}{12} = \frac{7}{8}$

d.  $\frac{x+1}{5} = \frac{x}{3}$

$8(t-2) = 7(12)$

a.)  $3(x+1) = 5x$

$3(14) = 5x$

$3x + 3 = 5x$

$\frac{42}{5} = \frac{5x}{5}$

$-3x$

$x = 8.4$

$\cancel{3x}$

$\cancel{\frac{3}{5}} = \cancel{\frac{2}{5}}$

$x = 1.5$

$8t - 16 = 84$

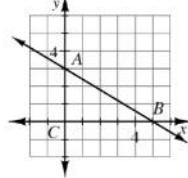
$+16 \quad +16$

$8t = 96$

$\frac{8t}{8} = \frac{96}{8}$

$t = 11.25$

- 3-32. Examine the graph of line  $\overleftrightarrow{AB}$  below. [3-32 HW eTool](#) (Desmos) [Homework Help](#).



a. Find the equation of  $\overleftrightarrow{AB}$ .

$$y = -\frac{3}{5}x + 3$$

b. Find the area and perimeter of  $\triangle ABC$ .

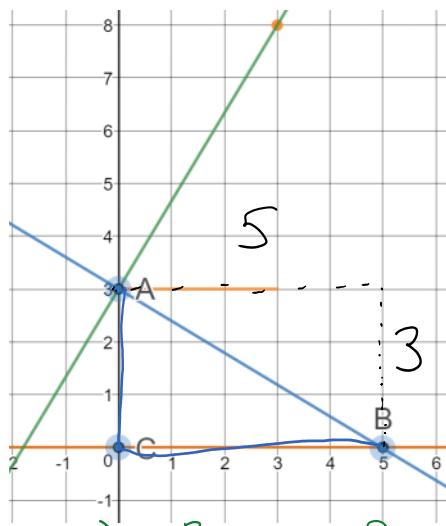
c. Write an equation of the line through  $A$  that is perpendicular to  $\overleftrightarrow{AB}$ .

b)  $A = \frac{1}{2}(5)(3) = 7.5$

$$P = 5.8 + 3 + 5 = 13.8$$

$$\sqrt{3^2 + 5^2} = \sqrt{x^2}$$

$$x = 5.8$$



c.)  $\frac{-3}{5} \perp \frac{5}{3}$   
 $(y = \frac{5}{3}x + 3)$

- 3-33. Rewrite the statements below into conditional ("If ..., then ...") form. [Homework Help](#)

a. Lines with the same slope are parallel.

If lines have the same slope, then they are  $\parallel$ .

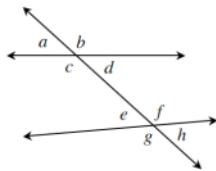
b. A vertical line has undefined slope.

If a line is vertical, then its slope is undefined.

c. The lines with slopes  $\frac{2}{3}$  and  $-\frac{3}{2}$  are perpendicular.

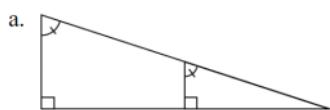
If lines have slopes  $\frac{2}{3} \cdot -\frac{3}{2} = -1$ , then they are  $\perp$ .

- 3-34. Examine the diagram below. Name the geometric relationships of the angles below. [Homework Help](#)

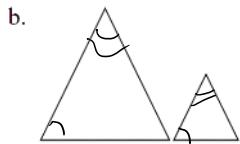


- a.  $d$  and  $e$  Alt. int.  $\angle$ 's  
 b.  $e$  and  $h$  Vert.  $\angle$ 's  
 c.  $a$  and  $e$  corr.  $\angle$ 's  
 d.  $c$  and  $d$  straight  $\angle$ 's

**3-54.** Decide if each pair of triangles below is similar. If the triangles are similar, justify your conclusion by stating the similarity condition you used. Also describe a possible sequence of transformations that would carry one onto the other. If the triangles are not similar, explain how you know. [Homework Help](#)

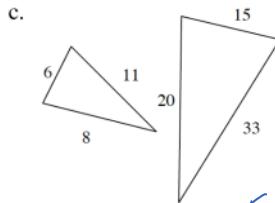


AA  
Dilation

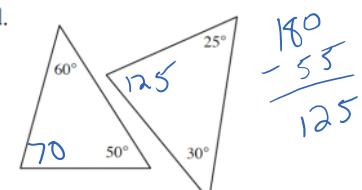


Equilateral Triangles

AA  
Translation &  
Dilation



$\frac{33}{11} = \frac{22}{11} = \frac{15}{6}$   
Not =



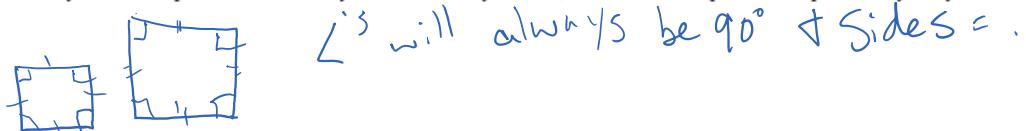
L's Not ~

**3-55.** Remember that two figures are similar whenever there is a sequence of transformations (including dilation) that carries one onto the other. [3-55 HW eTool](#) (Desmos) [Homework Help](#)

- a. Explain why all circles must be similar. That is, describe a sequence of transformations that will always carry one circle onto another.

Circles have no L's. You can always Translate + dilate  
by Stretching the diameter.

- b. Can you think of any other shapes that are always similar? If you can, draw an example and explain why they are always similar.



**3-56.** When you list *all* of the possible outcomes in a sample space by following an organized system (an orderly process), it is called a **systematic list**. There are different strategies that may help you make a systematic list, but what is most important is that you methodically follow your system until it is complete. [Homework Help](#)

To get home, Renae can take one of four buses: #41, #28, #55, or #81. Once she is on a bus, she will randomly select one of the following equally likely activities: listening to her MP3 player, writing a letter, or reading a book

- a. Create the sample space of all the possible ways Renae can get home and do one activity by making a systematic list.

41 M  
41 L  
41 B

28 M  
28 L  
28 B

55 M  
55 L  
55 B

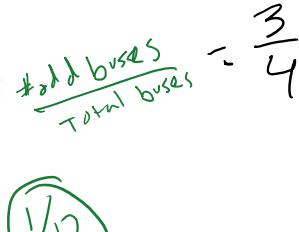
81 M  
81 L  
81 B

$$3 \times 4 = 12$$

- b. Use your sample space to find the following probabilities:

i. P(Renae takes an odd-numbered bus)  $\frac{3}{4}$

ii. P(Renae does not write a letter)  $\frac{2}{3}$



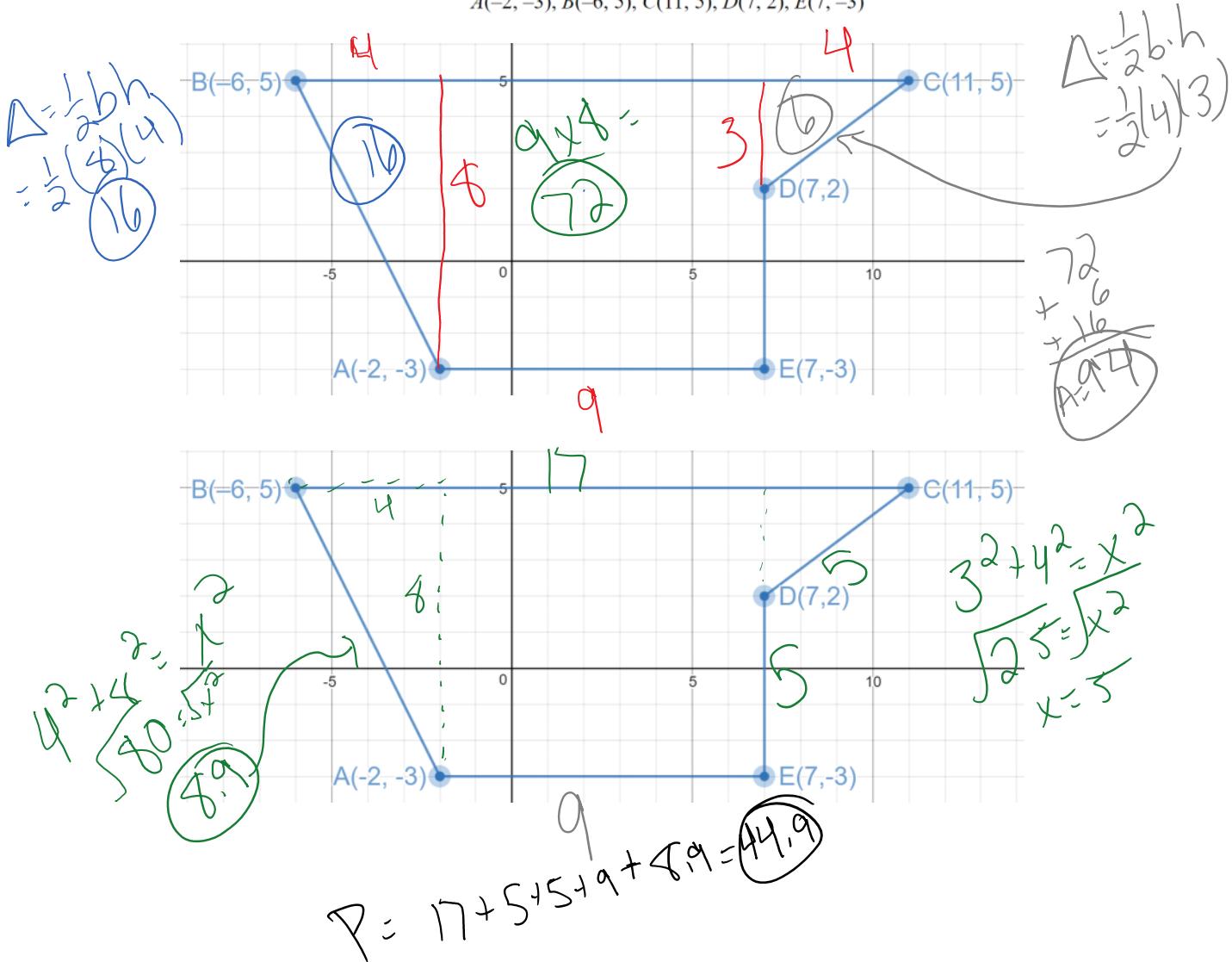
i. Renae takes an odd-numbered bus

ii. P(Renae does not write a letter)  $\frac{2}{3}$

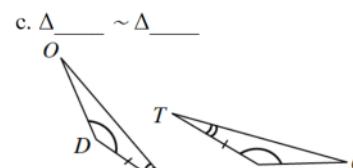
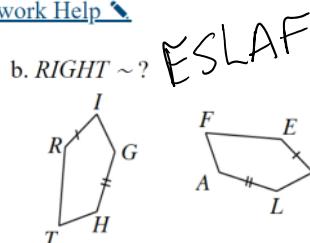
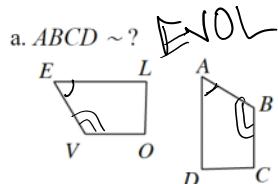
iii. P(Renae catches the #28 bus and then reads a book)  $\frac{1}{12}$

**3-57.** Graph the following points and connect them in the order given. Then find the area and perimeter of the shape. Show all work. [3-57 HW eTool](#) (Desmos) [Homework Help](#)

$$A(-2, -3), B(-6, 5), C(11, 5), D(7, 2), E(7, -3)$$



**3-58.** Assume that each pair of figures below is similar. Write a similarity statement to illustrate which parts of each shape correspond. Remember: letter order is important! [Homework Help](#)

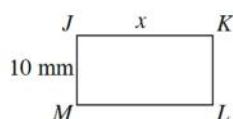
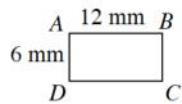


$\triangle DOG \sim \triangle FACT$

**3-65.** Solve for the missing lengths in the sets of similar figures below. You may want to set up tables to help you write equations.

Homework Help

a.  $ABCD \sim JKLM$

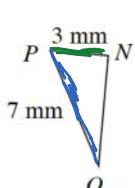
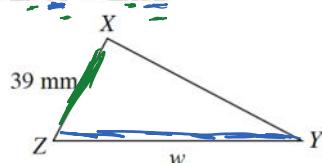


$$\frac{B}{S} = \frac{10}{6} \therefore \frac{x}{12}$$

$$\frac{120}{6} = \frac{6x}{6}$$

$$X = 20$$

b.  $\triangle NOP \sim \triangle XYZ$

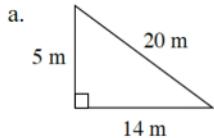


$$\frac{B}{S} = \frac{w}{7} \therefore \frac{39}{3}$$

$$\frac{3w}{3} = \frac{117}{3}$$

$$w = 39$$

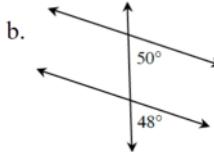
**3-66.** Examine each diagram below. Which diagrams are possible? Which are impossible? Justify each conclusion. Homework Help



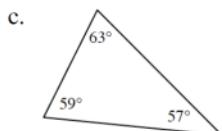
$$5^2 + 14^2 ? 20^2$$

$$25 + 196 ? 400$$

Not Right  $\Delta$ .

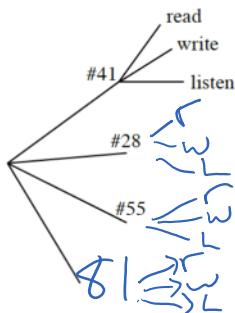


Possible  $\rightarrow$  Doesn't say they are II.



Not possible  $\rightarrow$  ADD to 179°

Creating a **tree diagram**, like the one started below, is one way to organize all the outcomes of a sample space. This structure organizes the list by connecting each bus with each activity.

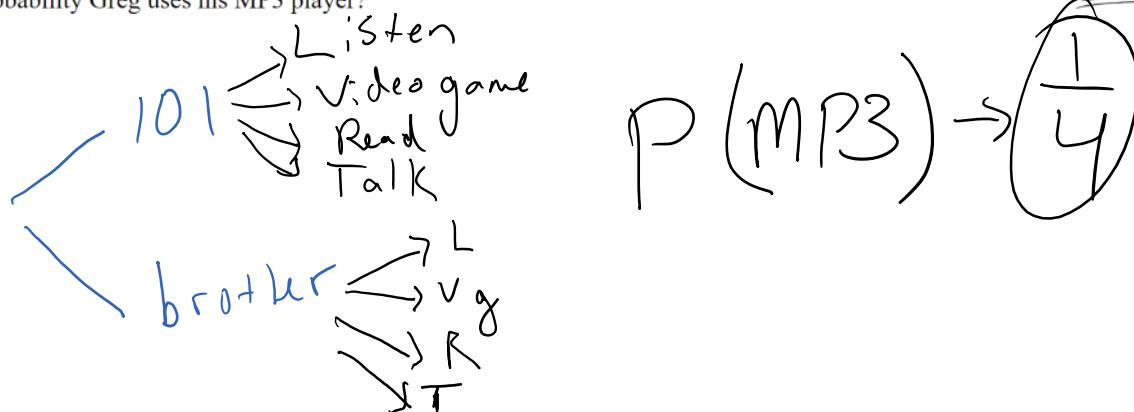


In this tree, the first set of branches represents the bus options. At the end of each of these branches are branches representing the activities. For example, if you follow the bold branches, Renae will take the #41 bus and will listen to her MP3 player. [Homework Help](#)

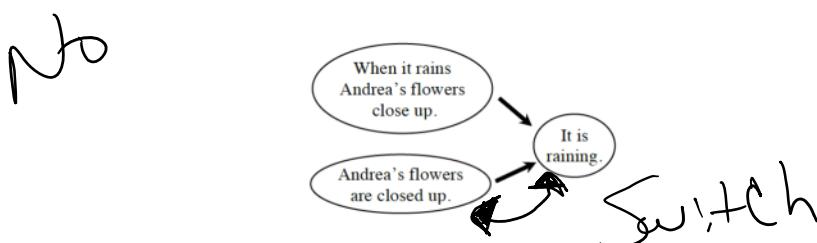
- a. On your paper, complete this tree diagram to show all of the different travel options that Renae could take. What is the probability that Renae does not read on the way home?  $3 \text{ options} \rightarrow 2 \text{ Not read } \frac{2}{3}$

b. Renae's cousin, Greg, can get home using the #101 bus or by going with his older brother. On the way home, Greg can listen to his MP3 player, play video games on his MP3 player, read his novel for English, or talk to the person next to him. Make a tree diagram for all the possible outcomes. What is the probability Greg uses his MP3 player?





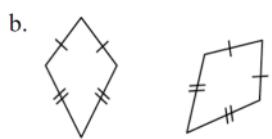
- 3-68.** Determine whether or not the reasoning in the flowchart below is correct. If it is wrong, redo the flowchart to make it correct.  
Homework Help 



- 3-69.** Describe a sequence of transformations that can show the figures below are similar. Remember that there can be more than one way.  
**Homework Help** 

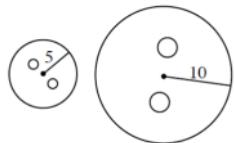
- a.  Reflection

b.  Rotation



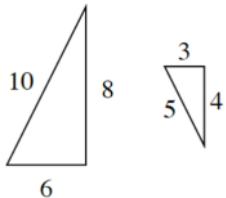
Rotation

c.



Dilate  $\times 2$

d.

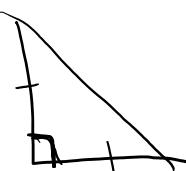


Rotate + Dilate  $\times 2$

- 3-70. Sketch each triangle if possible. If not possible, explain why not. [Homework Help](#)

- a. Right isosceles triangles
- b. Right obtuse triangles
- c. Scalene equilateral triangles
- d. Acute scalene triangles

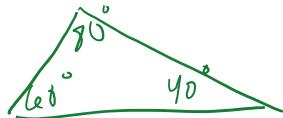
a.)



b.) Right  $\rightarrow 90^\circ$   
Obtuse  $\rightarrow > 90^\circ$   
★ would be more than  $180^\circ$

c.) Scalene  $\rightarrow$  All different  
Equilateral  $\rightarrow$  All same  $>$  Not possible

d.)

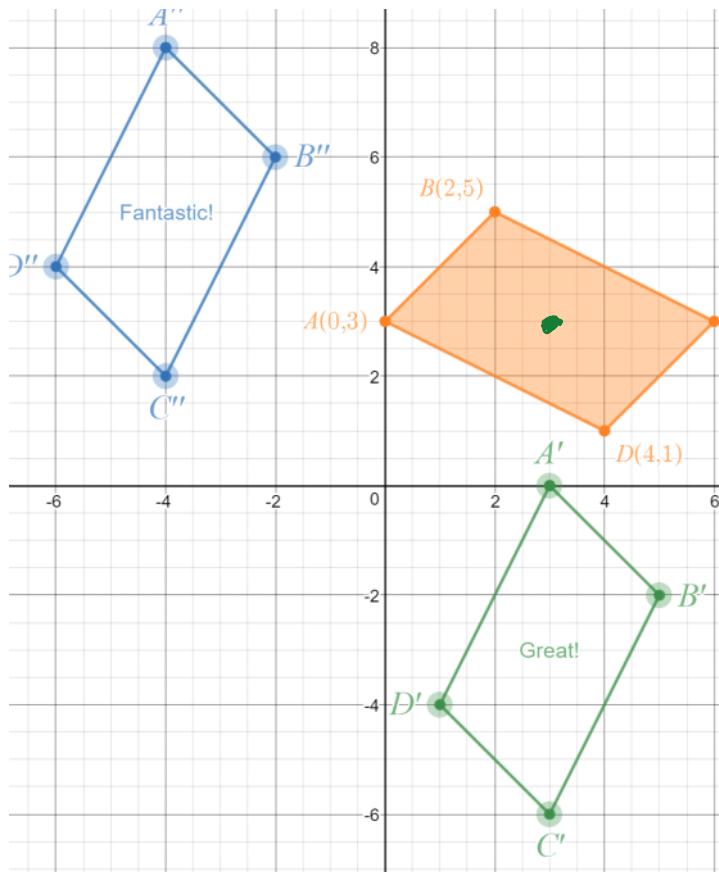


CH3 #76 to 81

Tuesday, October 23, 2018 3:24 PM

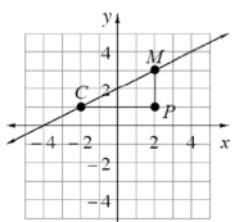
- 3-76. On graph paper, plot  $ABCD$  if  $A(0, 3)$ ,  $B(2, 5)$ ,  $C(6, 3)$ , and  $D(4, 1)$ . [3-76 HW eTool \(Desmos\)](#) [Homework Help](#).

- Rotate  $ABCD$   $90^\circ$  clockwise ( $\circlearrowright$ ) about the origin to form  $A'B'C'D'$ . Name the coordinates of  $B'$ .
- Translate  $A'B'C'D'$  up 8 units and left 7 units to form  $A''B''C''D''$ . Name the coordinates of  $C''$ .
- After rotating  $ABCD$   $180^\circ$  to form  $A'''B'''C'''D'''$ , Arah noticed that  $A'''B'''C'''D'''$  position and orientation was the same as  $ABCD$ . What was the point of rotation? How did you find it?

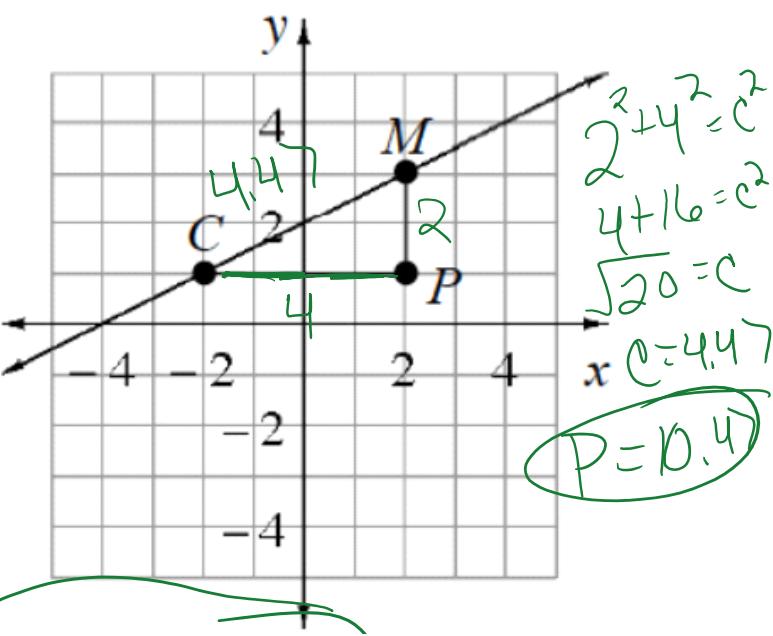


If it's  $180^\circ$  & Nothing  
Changes, it's around  
the center of the shape.

- 3-77. Examine the graph of line  $\overline{CM}$  below. [Homework Help](#)



- Find the equation of  $\overline{CM}$ .  $y = \frac{1}{2}x + 2$
- Find the area and perimeter of  $\triangle CPM$ .  $\frac{1}{2}(4)(2) = 4$
- Write an equation of the line through point  $M$  that is perpendicular to  $\overline{CM}$ .  $m(2, 3)$ , slope  $\perp = -2$



$$m(2,3) \text{ Slope } \perp = -2$$

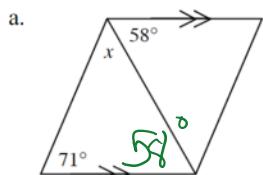
$$3 = -2(2) + b$$

$$3 = -4 + b$$

$$b = 7$$

$$y = -2x + 7$$

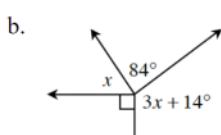
- 3-78. Use the relationships in each diagram below to solve for  $x$ . Justify your solution by stating which geometry relationships you used.
- [Homework Help](#)



$$58^\circ \rightarrow \text{Alt. int. } L's$$

$$\begin{array}{r} 180 \\ - 58 \\ \hline 122 \\ - 71 \\ \hline 51 \end{array}$$

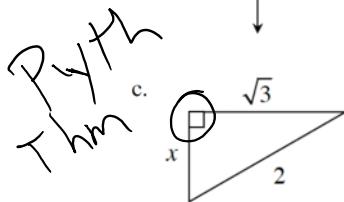
$$x = 51^\circ \rightarrow 10^\circ \text{ in } \triangle$$



$360^\circ$  Around

$$x + 84 + 3x + 14 + 90 = 360$$

$$\begin{array}{r} 4x + 188 = 360 \\ - 188 \quad - 188 \\ \hline 4x = 172 \end{array}$$



$$\text{Pyth}$$

$$x^2 + (\sqrt{2})^2 = 2^2$$

$$x^2 + 2 = 4$$

$$\sqrt{x^2} = \sqrt{2}$$

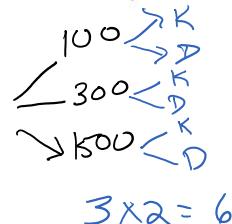
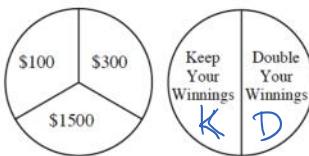
$$x = \sqrt{2}$$

$$(x = 1.41)$$

$$\frac{4x}{4} = \frac{172}{4}$$

$$x = 43$$

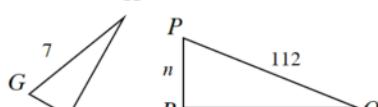
- 3-79. Congratulations! You are going to be a contestant on a new game show with a chance to win some money. You will spin the two spinners shown below to see how much money you will win. Test your ideas creating the situation below using the [3-79 Double Spinner](#) tool. [Homework Help](#)



- a. Make a tree diagram of all the possible outcomes of spinning the two spinners. At the ends of the branches, on the far right, write the amount you would win for each combination of spins.
- b. Are each of the outcomes in the sample space equally likely? Yes
- c. What is the probability that you will take home \$200? What is the probability that you will take home more than \$500?  $\frac{1}{6}$
- d. What is the probability that you will double your winnings? Does the probability that you will double your winnings depend on the result of the first spinner?  $\frac{1}{2}$
- e. What if the amounts on the first spinner were \$100, \$200, and \$1500? What is the probability that you would take home \$200? Justify your conclusion.  $\frac{1}{3}$  It's 1 of 3 options

- 3-80. Solve for the indicated side lengths. Show all work. [Homework Help](#)

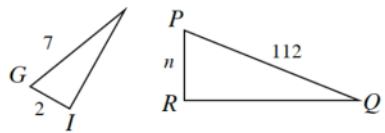
a.  $\Delta GHI \sim \Delta PQR$



$$\frac{B}{5} = \frac{112}{7} = \frac{n}{2}$$

$$\frac{7n}{7} = \frac{224}{7}$$

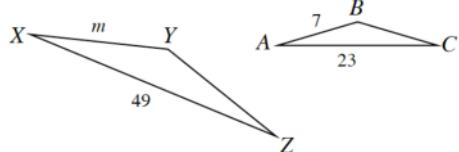
$$n = 32$$



$$\overline{5} \quad \overline{7} \quad \overline{-} \quad \overline{2}$$

$$n = 32$$

b.  $\triangle ABC \sim \triangle XYZ$

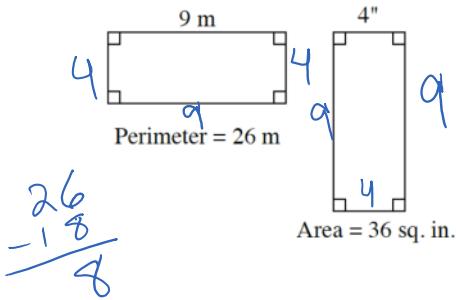


$$\frac{B}{S} = \frac{49}{23} = \frac{m}{7}$$

$$\frac{343 - 23m}{23} = \frac{23m}{23}$$

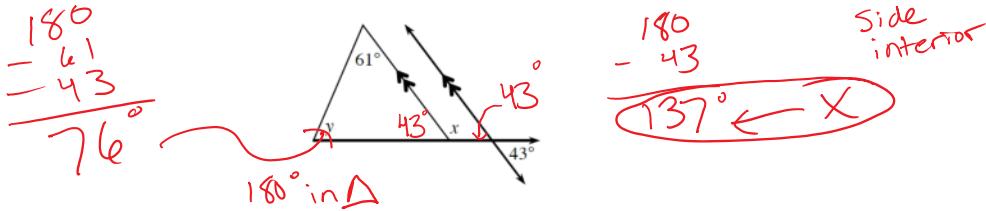
$$m = 14.9$$

3-81. Explain why the shapes below are similar.



They are Congruent,  
Also Similar.  
 $\angle S =$

- 3-108. Use the relationships in the diagram below to solve for  $x$  and  $y$ . Justify your solutions. [Homework Help](#)



Same  
Side  
interior

- 3-109. The area of the triangle below is 25 square units. Find the value of  $h$ . Then find the perimeter of the entire triangle. Show all work.

$$\begin{aligned} & 6^2 + 5^2 = y^2 \\ & \sqrt{y^2} = \sqrt{61} \\ & y = \sqrt{61} \\ & P = 10 + 7.8 + 6.4 \\ & P = 24.2 \end{aligned}$$

$$\begin{aligned} & 4^2 + 5^2 = x^2 \\ & \sqrt{41} = \sqrt{x^2} \\ & x = \sqrt{41} \end{aligned}$$

$$\begin{aligned} & \frac{1}{2} 10 \cdot h = 25 \\ & 5h = 25 \\ & h = 5 \end{aligned}$$

- 3-110. You help out at the bowling alley on weekends. One of the arcade games has a bin filled with stuffed animals. A robotic arm randomly grabs a stuffed animal as a prize for the player. You are in charge of filling the bin. [Homework Help](#)



- a. You are told that the probability of getting a stuffed giraffe today is  $\frac{2}{5}$ . If there are 28 giraffes in the bin, what is the total number of stuffed animals in the bin?

$$\frac{2}{5} = \frac{28}{x}$$

$$x = 70$$

- b. The next weekend, you arrive to find the bin contains 22 unicorns, 8 gorillas, 13 striped fish, and 15 elephants. A shipment of stuffed whales arrives. What is the probability of getting a sea animal (whale or fish) if you add 17 whales to the bin? Express the probability as a percent.

$$\text{Total} = 75 \quad p(\text{whale OR fish}) = p(\text{whale}) + p(\text{fish})$$

$$\frac{17}{75} + \frac{13}{75} = \frac{30}{75} = 40\%$$

- c. You are told that the probability of selecting a stuffed alligator needs to be 5%. One weekend you arrive to find there are exactly 3 alligators left. How many total animals should be in the bin to maintain the probability of 5% for an alligator?

$$\frac{5}{100} = \frac{3}{x}$$

$$\frac{300}{5} = \frac{5x}{5}$$

$$x = 60$$

- 3-111. This problem is a checkpoint for writing linear equations from multiple representations. It will be referred to as Checkpoint 3.

Write a linear equation that represents each situation. [Homework Help](#)



- a. An equation for the line at right.

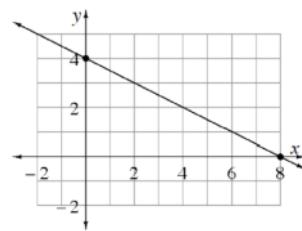
$$y = -\frac{1}{2}x + 4$$

- b. An equation for a line perpendicular to the line at right and passing through the point  $(-1, -3)$ .

$$m = \frac{2}{1}$$

- c. An equation of the line passing through the points  $(4, 3)$  and  $(-1, 1)$ .

- d. At the concert, Elite Parking charges \$15 for the first hour and \$7 for each additional hour of parking. Write an equation to represent the cost ( $C$ ) for parking ( $t$ ) hours.



$$\begin{aligned} b.) \quad & y = mx + b \\ & -3 = 2(-1) + b \\ & -3 = -2 + b \\ & b = -1 \end{aligned}$$

$$y = 2x - 1$$

$$\begin{aligned} c.) \quad & \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - 3}{-1 - 4} = \frac{-2}{-5} = \frac{2}{5} \\ & y - 3 = \frac{2}{5}(x + 1) \\ & y = \frac{2}{5}x + \frac{17}{5} \end{aligned}$$

$$\begin{aligned} & 3 = \frac{2}{5}(4) + b \\ & 3 = \frac{8}{5} + b \\ & b = \frac{7}{5} \end{aligned}$$

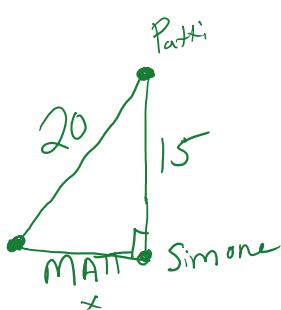
$$\begin{aligned} \text{I. } & 1 = 2(-1) + b \\ -3 &= 2 + b \\ -3 &= 2 + b \\ b &= -1 \end{aligned}$$

$$\begin{aligned} & x_2 - x_1 = -1 - 4 \\ & y = 2/5x + 7/5 \end{aligned}$$

$$\begin{aligned} 3 &= 8/5 + b \\ -8/5 &- 8/5 \\ b &= 7/5 \end{aligned}$$

$$\text{C. } l = 7x + 15$$

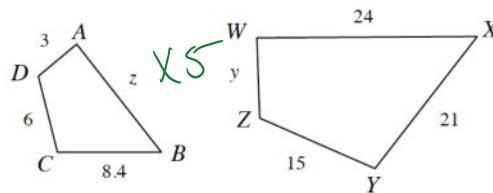
- 3-112. Patti lives 20 miles northeast of Matt. Simone lives 15 miles due south of Patti. If Matt lives due west of Simone, approximately how many miles does he live from Simone? Draw a diagram and show all work. [Homework Help](#)



$$\begin{aligned} x^2 + 15^2 &= 20^2 \\ -15^2 &- 15^2 \\ \sqrt{x^2} &= \sqrt{175} = 3.2 \text{ miles} \end{aligned}$$

- 3-113. List a sequence of transformations that demonstrates  $ABCD \sim WXYZ$ , then find  $y$  and  $z$ . [Homework Help](#)

Rotate + Dilate



$$\begin{aligned} z &= \frac{24}{5} = 4.8 \\ y &= 3 \times 5 = 15 \end{aligned}$$