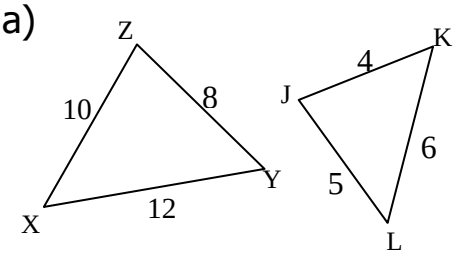
IM 2 Unit 3 Review#1 Name: _____ Per:_____

1. Determine if the pair of triangles are similar. (circle yes or no) **If** they are similar state the <u>similarity conjecture</u> (SSS, SAS, or AA) that makes the pair of triangles similar and write the correct similarity statement.

a)

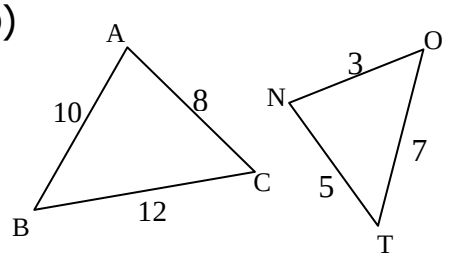


YES or NO

Reason:_____

ΔXYZ ~_____

b)

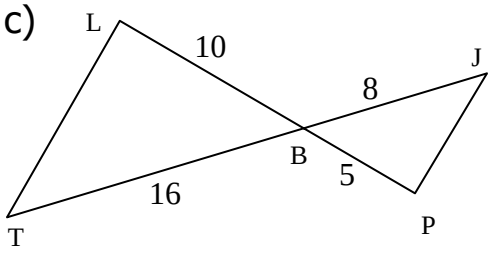


YES or NO

Reason:_____

ΔABC ~_____

c)



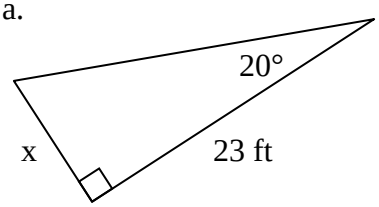
YES or NO

Reason:_____

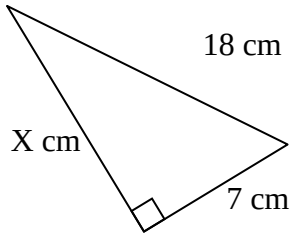
ΔBLT ~_____

2. Find the value of each of the following variables.

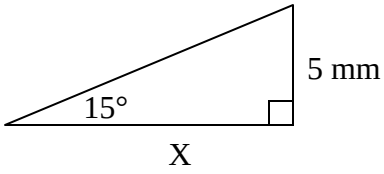
a.



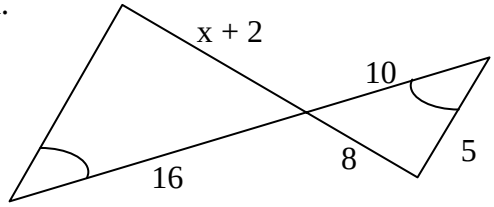
b.



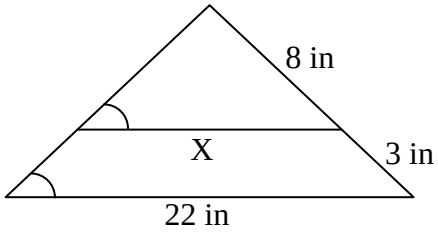
c.



d.



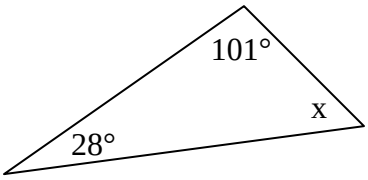
e.



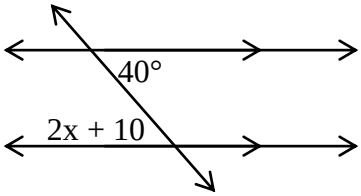
3. You are asked to measure the flagpole at the school, but they won't let you climb it to get the measurement. So you use your math skills to calculate it. With your eye height at 5.2 ft and you standing 35 ft from the base of the pole, your eye angle to the top of the pole is 27°. What is the height of the pole?

4. Find x for each of the following:

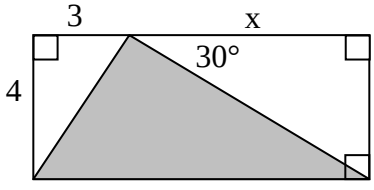
a.



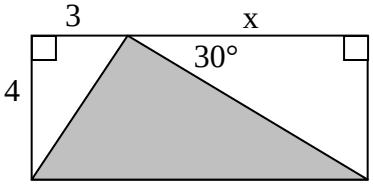
b.



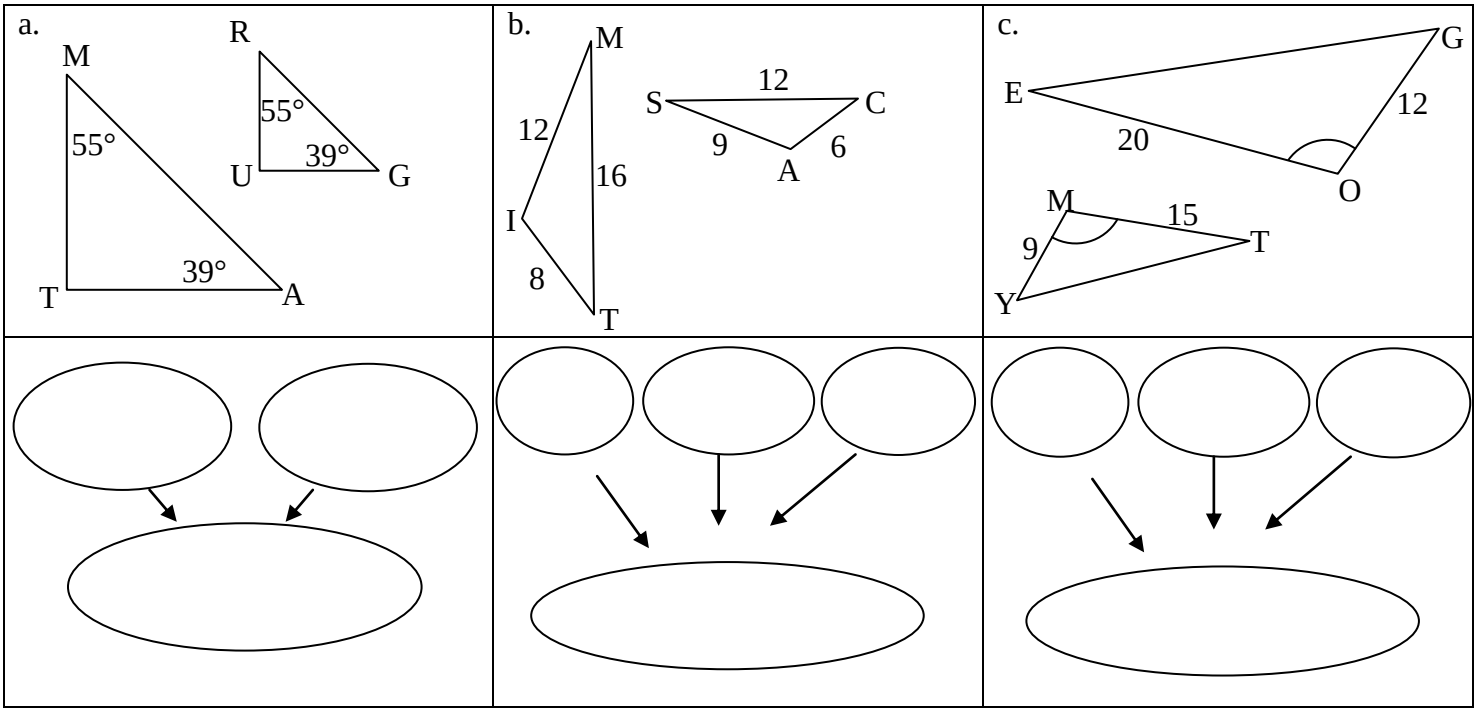
c.



5. Find the area and perimeter of the shaded triangle.

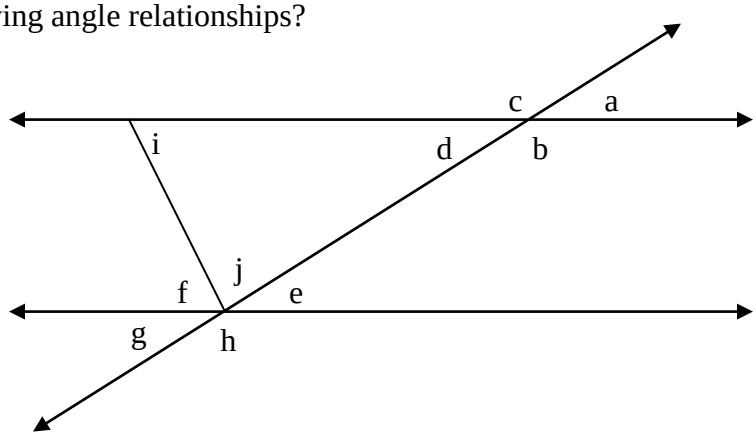


6. Use a flow chart to prove each of the following sets of triangles are similar:



7. What is the vocabulary that describes the following angle relationships?

a. $\angle a$ and $\angle d$
b. $\angle a$ and $\angle e$
c. $\angle e$ and $\angle d$
d. $\angle a$ and $\angle b$
e. $\angle e$ and $\angle g$
f. $\angle d$ and $\angle g$
g. $\angle a$ and $\angle h$
h. $\angle e$ and $\angle b$
i. $\angle i$, $\angle j$ and $\angle d$

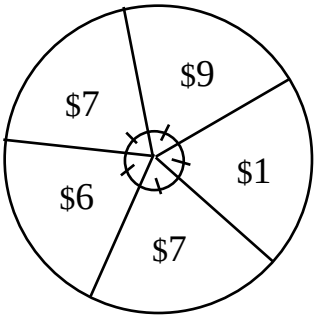


Check Answers (Pages 1 & 2)

8.37	No	Yes	Yes	SSS~	SAS~	BPJ		51	6.93
10.8	LKJ	15	16	16.58	18.66	19.86	23.03	22.93	

Alternate Interior Angles	Corresponding Angles	Corresponding Angles	Same-Side Interior Angles
Supplementary Angles	Supplementary Angles	Triangle Angle Sum Angles	Vertical Angles
Vertical Angles			

8. If you spin 50 times, how many times would you expect to get each of these dollar amounts?



a) $9

b) $7

c) How much money would you expect to collect in 50 spins?

d) What is the Expected Value of this game?

9. David Dunkalot has hired you to determine his free throw probabilities before tonight's game. For a "1 and 1" shooting foul, he tells you that he only has a 25% probability of making his first free throw attempt. But, if he makes his first shot, he has a 60% probability of making his second shot.

a) Draw a tree diagram or an area model to represent this situation. Be sure you label it clearly so that David can follow your explanation.

b) Using the information from your diagram, calculate the probability of David scoring:
i) 0 points ii) 1 point iii) 2 points

10. Three coins are flipped. Make a tree diagram showing all the possible combinations of heads and tails.

Check Answers (Page 3)

.75	$6	10 times	.15	20 times	.10	$300