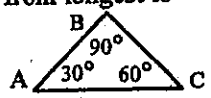
FACEing MATH™ Name: _____

Lesson 6: Triangle Inequalities

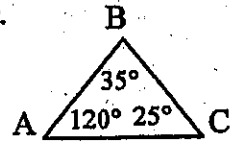
Directions: ***Solve each problem and use a pencil to DRAW the object that corresponds with your answer. SHOW YOUR STEPS!!!***

1. List the sides from longest to shortest.



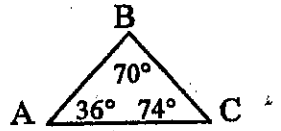
(a) If your answer is $\overline{AB}, \overline{BC}, \overline{AC}$ draw the following helmet on the head.	
(b) If your answer is $\overline{AC}, \overline{AB}, \overline{BC}$ draw the following helmet on the head.	

2. List the sides from longest to shortest.



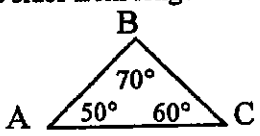
(a) If your answer is $\overline{BC}, \overline{AC}, \overline{AB}$ write the number 17 on the helmet.	17
(b) If your answer is $\overline{AC}, \overline{BC}, \overline{AB}$ write the number 2 on the helmet.	2

3. List the sides from longest to shortest.



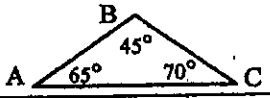
(a) If your answer is $\overline{BC}, \overline{AB}, \overline{AC}$ draw the following mouth.	
(b) If your answer is $\overline{AB}, \overline{AC}, \overline{BC}$ draw the following mouth.	

4. List the sides from longest to shortest.



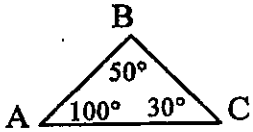
(a) If your answer is $\overline{BC}, \overline{AB}, \overline{AC}$ draw the following nose.	
(b) If your answer is $\overline{AC}, \overline{AB}, \overline{BC}$ draw the following nose.	

5. List the sides from longest to shortest.



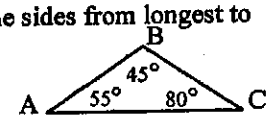
(a) If your answer is $\overline{AB}, \overline{BC}, \overline{AC}$ draw the following label on the shirt.	NASCAR
(b) If your answer is $\overline{BC}, \overline{AB}, \overline{AC}$ draw the following label on the shirt.	CRASH!

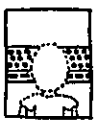
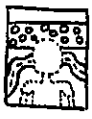
6. List the sides from longest to shortest.



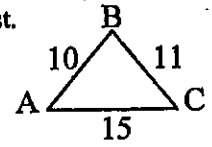
(a) If your answer is $\overline{AB}, \overline{BC}, \overline{AC}$ draw the following lines on the shirt.	
(b) If your answer is $\overline{BC}, \overline{AC}, \overline{AB}$ draw the following lines on the shirt.	

7. List the sides from longest to shortest.



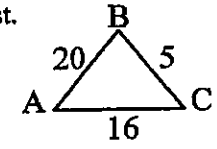
(a) If your answer is $\overline{AB}, \overline{BC}, \overline{AC}$ draw a straight road and full stands in the background.	
(b) If your answer is $\overline{BC}, \overline{AC}, \overline{AB}$ draw a curved road and full stands in the background.	

8. List the angles from largest to smallest.



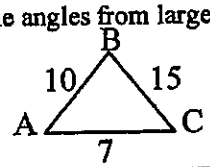
(a) If your answer is $\angle B, \angle A, \angle C$ draw the front of a car on the road.	
(b) If your answer is $\angle B, \angle C, \angle A$ draw the back of a car on the road.	

9. List the angles from largest to smallest.



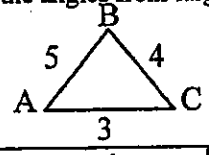
(a) If your answer is $\angle C, \angle B, \angle A$ write the number 17 on the car.	17
(b) If your answer is $\angle B, \angle C, \angle A$ write the number 2 on the car.	2

10. List the angles from largest to smallest.



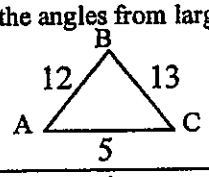
(a) If your answer is $\angle A, \angle C, \angle B$ draw tufts of grass below the road.	
(b) If your answer is $\angle A, \angle B, \angle C$ draw bushes in the background.	

11. List the angles from largest to smallest.



(a) If your answer is $\angle C, \angle A, \angle B$ draw this flag in the background.	
(b) If your answer is $\angle A, \angle B, \angle C$ draw this flag in the background.	

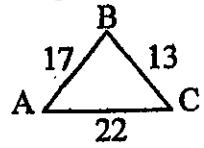
12. List the angles from largest to smallest.



(a) If your answer is $\angle A, \angle C, \angle B$ write these words in the background.	Zoom! Zoom!
(b) If your answer is $\angle A, \angle B, \angle C$ write these words in the background.	Oh no!

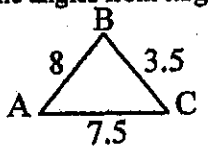
Directions: ***Solve each problem and COLOR the object that corresponds with your answer. SHOW YOUR STEPS!!!***

13. List the angles from largest to smallest.



(a) If your answer is $\angle C, \angle B, \angle A$ color the face mask on the helmet yellow.
(b) If your answer is $\angle B, \angle C, \angle A$ color the face mask on the helmet gray.

14. List the angles from largest to smallest.



(a) If your answer is $\angle C, \angle B, \angle A$ color the numbers on the helmet and car yellow.
(b) If your answer is $\angle C, \angle A, \angle B$ color the numbers on the helmet and car red.

15. Determine whether the following are possible lengths of the sides of a triangle.

3, 4, 5

(a) If your answer is YES color the rest of the helmet purple.
(b) If your answer is NO color the rest of the helmet green.

16. Determine whether the following are possible lengths of the sides of a triangle.

5, 5, 10

(a) If your answer is YES color the face, neck, and arms apricot.
(b) If your answer is NO color the face, neck, and arms brown.

17. Determine whether the following are possible lengths of the sides of a triangle.

6, 7, 15

(a) If your answer is NO outline the teeth and nose in black.
(b) If your answer is YES outline the teeth and nose in brown.

18. Determine whether the following are possible lengths of the sides of a triangle.

5, 7, 11

(a) If your answer is NO color the inside of the mouth black and the tongue pink.
(b) If your answer is YES color the inside of the mouth pink and the tongue red.

19. Determine whether the following are possible lengths of the sides of a triangle.

12, 24, 40

(a) If your answer is YES outline the label on the shirt in purple.
(b) If your answer is NO outline the label on the shirt in black.

20. Determine whether the following are possible lengths of the sides of a triangle.

10, 17, 25

(a) If your answer is YES color the shirt purple and yellow.
(b) If your answer is NO color the shirt red and orange.

21. Determine whether the following are possible lengths of the sides of a triangle.

5, 12, 13

(a) If your answer is NO color the people in the background purple.
(b) If your answer is YES color the people in the background orange.

22. Two sides of a triangle are given. Between which two numbers must the third side be?

2, 5

(a) If your answer is 3 and 7 color the stands where the people are gray.
(b) If your answer is 2 and 8 color the stands where the people are red.

23. Two sides of a triangle are given. Between which two numbers must the third side be?

7, 12

(a) If your answer is 4 and 20 color the flag purple with a black handle.
(b) If your answer is 5 and 19 color the flag black and white with a brown handle.

24. Two sides of a triangle are given. Between which two numbers must the third side be?

10, 20

(a) If your answer is 10 and 30 color the road black and the car red and gray.
(b) If your answer is 9 and 31 color the road gray and the car green.

25. Two sides of a triangle are given. Between which two numbers must the third side be?

6, 11

(a) If your answer is 5 and 17 color the area under the road green.
(b) If your answer is 4 and 18 color the area under the road brown.

26. Two sides of a triangle are given. Between which two numbers must the third side be?

23, 37

(a) If your answer is 13 and 61 color the sky gray.
(b) If your answer is 14 and 60 color the sky blue.

27. Two sides of a triangle are given. Between which two numbers must the third side be?

15, 25

(a) If your answer is 10 and 40 outline the letters in the background in black.
(b) If your answer is 15 and 25 outline the letters in the background in red.

Artistic Tip: **When you are done coloring, it looks nice to outline the major features using a black crayon or marker.**