Name _____ Date _____ Class _____

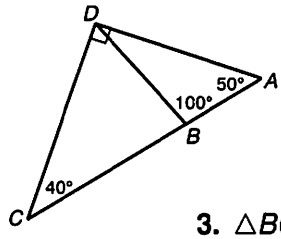
TEKS G.1.A

LESSON 4-1

Practice

Classifying Triangles

Classify each triangle by its angle measures. (*Note:* Some triangles may belong to more than one class.)

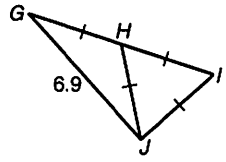


1. $\triangle ABD$ _____

2. $\triangle ADC$ _____

3. $\triangle BCD$ _____

Classify each triangle by its side lengths. (*Note:* Some triangles may belong to more than one class.)



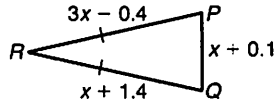
4. $\triangle GIJ$ _____

5. $\triangle HIJ$ _____

6. $\triangle GHJ$ _____

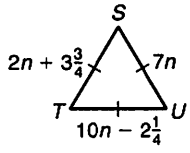
Find the side lengths of each triangle.

7.



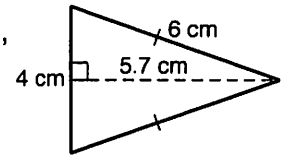
_____

8.



_____

9. Min works in the kitchen of a catering company. Today her job is to cut whole pita bread into small triangles. Min uses a cutting machine, so every pita triangle comes out the same. The figure shows an example. Min has been told to cut 3 pita triangles for every guest. There will be 250 guests. If the pita bread she uses comes in squares with 20-centimeter sides and she doesn't waste any bread, how many squares of whole pita bread will Min have to cut up?



_____

10. Follow these instructions and use a protractor to draw a triangle with sides of 3 cm, 4 cm, and 5 cm. First draw a 5-cm segment. Set your compass to 3 cm and make an arc from one end of the 5-cm segment. Now set your compass to 4 cm and make an arc from the other end of the 5-cm segment. Mark the point where the arcs intersect. Connect this point to the ends of the 5-cm segment. Classify the triangle by sides and by angles. Use the Pythagorean Theorem to check your answer.

_____

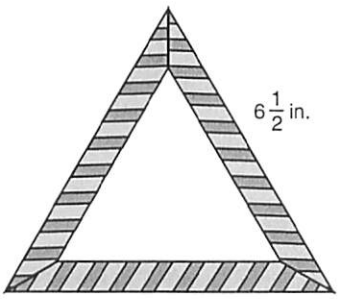
Name _____ Date _____ Class _____

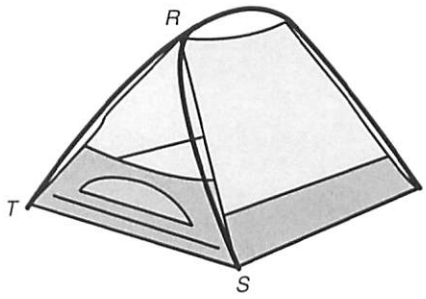
TEKS G.1.A

LESSON 4-1

Problem Solving

Classifying Triangles





1. Aisha makes triangular picture frames by gluing three pieces of wood together in the shape of an equilateral triangle and covering the wood with ribbon. Each side of a frame is $6\frac{1}{2}$ inches long. How many frames can she cover with 2 yards of ribbon?

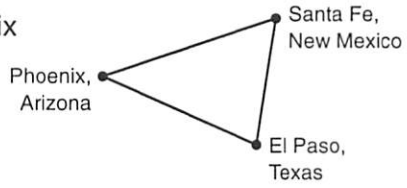
_____

2. A tent's entrance is in the shape of an isosceles triangle in which $\overline{RT} \cong \overline{RS}$. The length of $\overline{TS}$ is 1.2 times the length of a side. The perimeter of the entrance is 14 feet. Find each side length.

_____

Use the figure and the following information for Exercises 3 and 4.

The distance "as the crow flies" between Santa Fe and Phoenix is 609 kilometers. This is 245 kilometers less than twice the distance between Santa Fe and El Paso. Phoenix is 48 kilometers closer to El Paso than it is to Santa Fe.



3. What is the distance between each pair of cities?

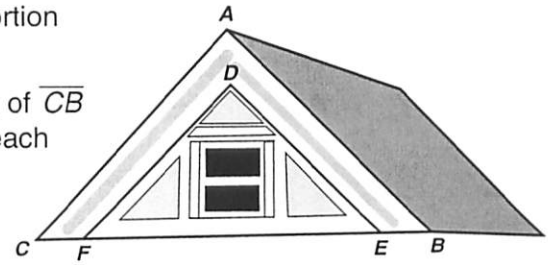
_____

_____

4. Classify the triangle that connects the cities by its side lengths. _____

Choose the best answer.

A *gable,* as shown in the diagram, is the triangular portion of a wall between a sloping roof.



5. Triangle *ABC* is an isosceles triangle. The length of $\overline{CB}$ is 12 feet 4 inches and the congruent sides are each $\frac{3}{4}$ this length. What is the perimeter of $\triangle ABC$?

   A 31 ft 4 in. **C** 21 ft 7 in.

   B 30 ft 10 in. **D** 18 ft 6 in.

6. In $\triangle DEF$, $\overline{DE}$ and $\overline{DF}$ are each 6 feet 3 inches long. This length is 0.75 times the length of $\overline{FE}$. What is the perimeter of $\triangle DEF$?

   F 12 ft 4 in. **H** 17 ft 2 in.

   G 14 ft 7 in. **J** 20 ft 10 in.