

Name: _____

Key

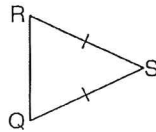
Date: _____

HR: _____

Isosceles and Equilateral Triangles- In class Practice

1. Refer to the figure.

- a. What kind of triangle is $\triangle QRS$? *isosceles*
- b. Name the legs of $\triangle QRS$. *$\overline{RS}, \overline{QS}$*
- c. Name the base of $\triangle QRS$. *\overline{RQ}*
- d. Name the vertex angle of $\triangle QRS$. *$\angle S$*
- e. Name the base angles of $\triangle QRS$. *$\angle R, \angle Q$*



2. Determine whether each statement is *always*, *sometimes*, or *never* true.

- a. If a triangle has three congruent sides, then it has three congruent angles. *always true*
- b. If a triangle is isosceles, then it is equilateral. *Sometimes*
- c. If a right triangle is isosceles, then it is equilateral. *never*
- d. The largest angle of an isosceles triangle is obtuse. *sometimes*
- e. If a right triangle has a 45° angle, then it is isosceles. *always*
- f. If an isosceles triangle has three acute angles, then it is equilateral. *sometimes*
- g. The vertex angle of an isosceles triangle is the largest angle of the triangle. *sometimes*

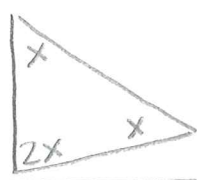
3. Give the measures of the three angles of each triangle.

- a. an equilateral triangle *60, 60, 60*
- b. an isosceles right triangle *45, 45, 90*
- c. an isosceles triangle in which the measure of the vertex angle is 70 *70, 55, 55*
- d. an isosceles triangle in which the measure of a base angle is 70 *70, 70, 40*
- e. an isosceles triangle in which the measure of the vertex angle is twice the measure of one of the base angles *45, 45, 90*

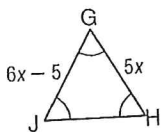
Find x .

$$4x = 180$$

$$x = 45$$



4.

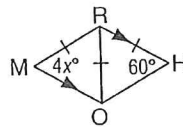


$$6x - 5 = 5x$$

$$-5 = -x$$

$$x = 5$$

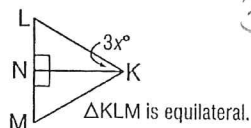
5.



$$4x = 60$$

$$x = 15$$

6.



$$3x + 3x = 60$$

$$6x = 60$$

$$x = 10$$