Acc Geometry **Name**_____

4.1 & 4.2 Practice 2020 **Date**_____

Warm-Up:

4.1 Warm-Up:

Directions: Find x and the measure of each side of the triangle.

1. ΔFGH is equilateral with FG = x + 5, GH = 3x – 9, and FH = 2x – 2.

X= _____

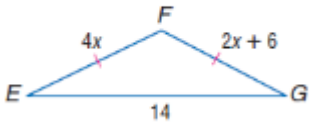
FG= _____

GH= _____

FH= _____

4.1 Warm-Up:

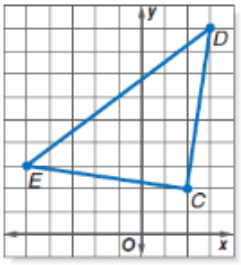
2. *Find x and the measure of each side of isosceles triangle EFG.*



4.1 Warm-Up:

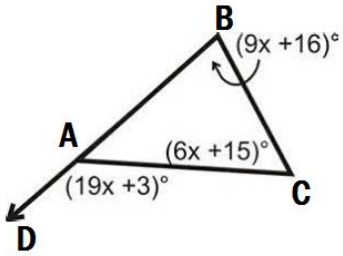
3. **COORDINATE GEOMETRY** **Find the measures of the sides of $\triangle DEC$. Classify the triangle by sides.**

Use the Distance Formula to find the lengths of each side.



4.2 Angle Example:

4. Exterior Angle Theorem: The measure of the exterior angle is the sum of the measures of the remote interior angles.



4.1 & 4.2 Practice Worksheet 2020 **Taken from textbook**

1. Supply the correct numbers to complete each sentence.

a. In an obtuse triangle, there are ____ acute angle(s), ____ right angle(s), and ____ obtuse angle(s).

b. In an acute triangle, there are ____ acute angle(s), ____ right angle(s), and ____ obtuse angle(s).

c. In a right triangle, there are ____ acute angle(s), ____ right angle(s), and ____ obtuse angle(s).

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

a. A right triangle is scalene.

b. An obtuse triangle is isosceles.

c. An equilateral triangle is a right triangle.

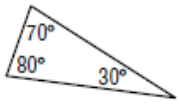
d. An equilateral triangle is isosceles.

e. An acute triangle is isosceles.

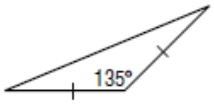
f. A scalene triangle is obtuse.

3. Describe each triangle by as many of the following words as apply: *acute*, *obtuse*, *right*, *scalene*, *isosceles*, or *equilateral*.

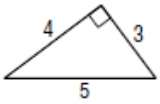
a.



b.



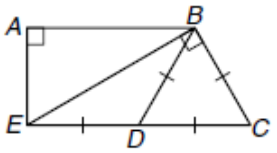
c.



Identify the indicated type of triangles.

4. right

5. isosceles



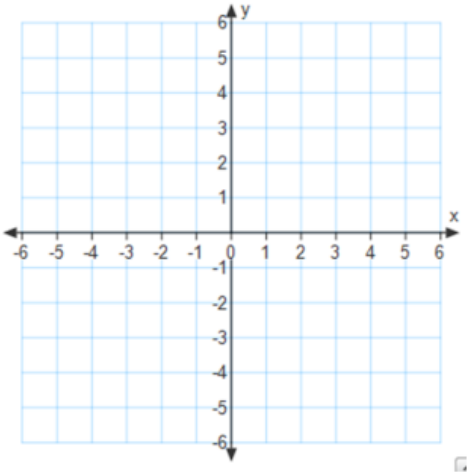
6. scalene

7. Find the measure of each side of equilateral $\triangle RST$ with $RS = 2x + 2$, $ST = 3x$, and $TR = 5x - 4$.

8. Find the measure of each side of isosceles $\triangle ABC$ with $AB = BC$ if $AB = 4y$, $BC = 3y + 2$, and $AC = 3y$.

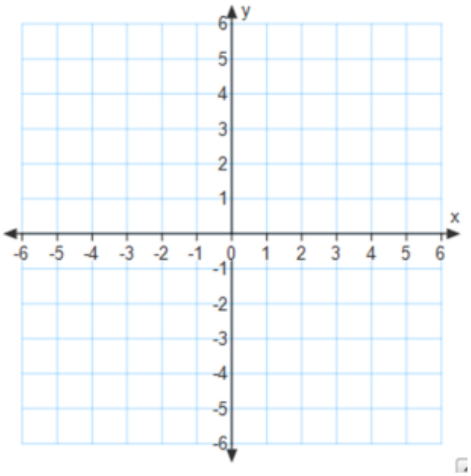
Find the measures of the sides of $\triangle RST$ and classify each triangle by its sides.

13. $R(0, 2)$, $S(2, 5)$, $T(4, 2)$



RS =_____ ST =_____ RT= _____ Classification:_____

14. $R(1, 3)$, $S(4, 7)$, $T(5, 4)$



RS =_____ ST =_____ RT= _____ Classification:_____

Find each measure if $m\angle 4 = m\angle 5$.

13. $m\angle 1$

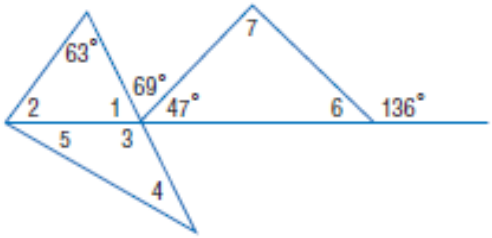
14. $m\angle 2$

15. $m\angle 3$

16. $m\angle 4$

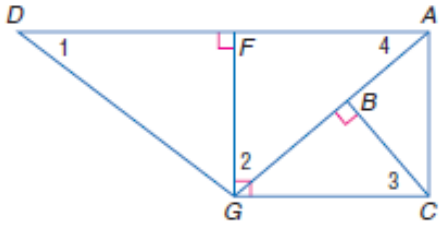
17. $m\angle 5$

18. $m\angle 6$



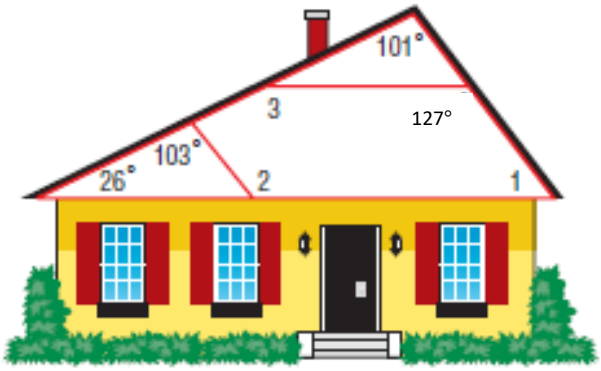
Find each measure if $m\angle DGF = 53$ and $m\angle AGC = 40$.

19. $m\angle 1$
20. $m\angle 2$
21. $m\angle 3$
22. $m\angle 4$



HOUSING **For Exercises 27–29, use the following information.**
The two braces for the roof of a house form triangles. Find each measure.

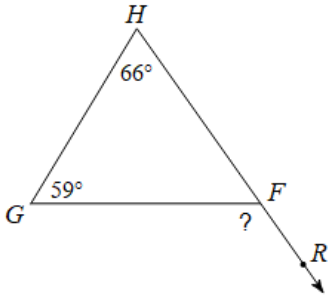
27. $m\angle 1$
28. $m\angle 2$
29. $m\angle 3$



Exterior Angles

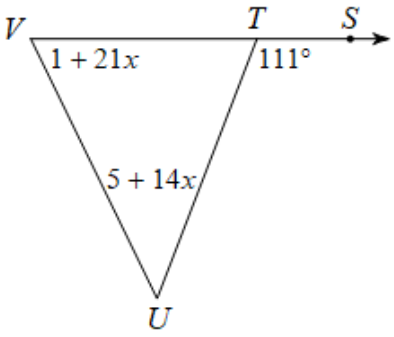
Find the measure of each angle indicated.

1)



Solve for *x*.

2)



Find the measure of the angle indicated.

3) Find $m\angle G$.