

Geometry

3.4, 3.5, & 4.5 Review

Name: _____

Period: _____

Date: _____

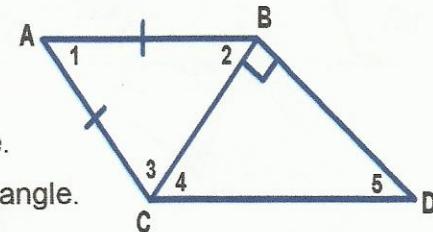
1. Find the requested parts of the triangles.

 \overline{AC} and \overline{AB} \overline{CD} $\angle ABC$ and $\angle ACB$

a) Name the legs of the isosceles triangle.

b) Name the hypotenuse of the right triangle.

c) Name the base angles of the isosceles triangle.

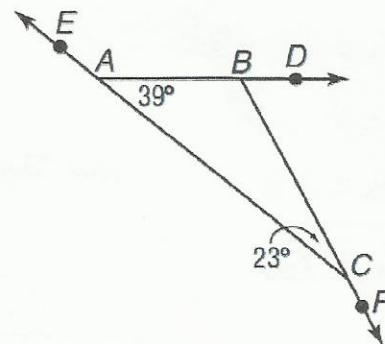


2. Refer to the figure.

a) Name the three interior angles of the triangle.

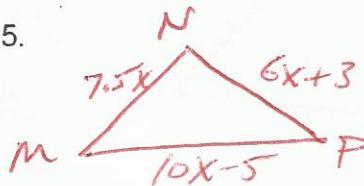
 $\angle BAC$, $\angle BCA$, $\angle ABC$

b) Name three exterior angles of the triangle.

 $\angle BAE$, $\angle DBC$, $\angle CFA$ c) Name the remote interior angles of $\angle EAB$. $\angle ABC$, $\angle BCA$ 

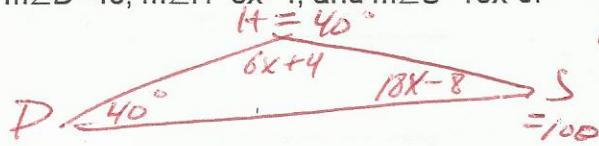
Classify the following triangles by either angles or sides using the given information.

3. Equilateral / Equiangular

The perimeter of triangle MNP is 45. $\overline{MN} = 7.5x$, $\overline{NP} = 6x+3$,and $\overline{MP} = 10x - 5$.

$$\begin{aligned} 7.5x + 6x + 3 + 10x - 5 &= 45 \\ 23.5x - 2 &= 45 \\ 23.5x &= 47 \\ x &= 2 \end{aligned}$$

4. Isosceles

In triangle DHS, $m\angle D=40$, $m\angle H=6x+4$, and $m\angle S=18x-8$.

$$\begin{aligned} 6x+4+18x-8+40 &= 180 \\ 24x+36 &= 180 \\ 24x &= 144 \\ x &= 6 \end{aligned}$$

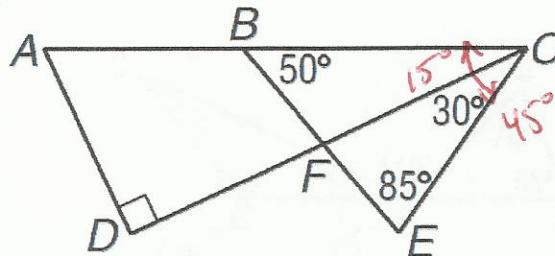
Draw a triangle with the given conditions. Classify it by both sides and angles.

5. Isosceles Right $\triangle TIE$, $m\angle T = 90$, $\overline{TI} = 7$, $\overline{TE} = 7$



6. Scalene Right

Classify Triangle ADC.

Find $m\angle ACD$.

7. Find the measure of each angle.

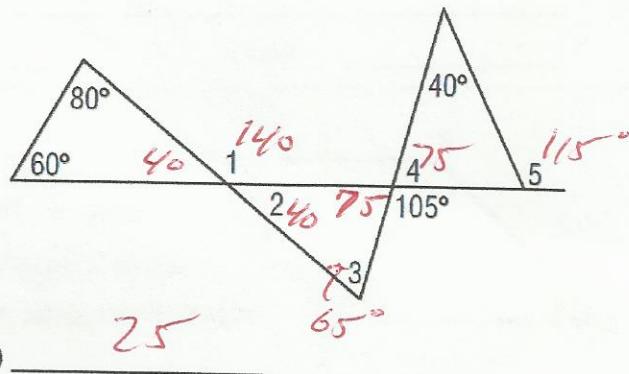
a) $m\angle 1 = 140^\circ$

b) $m\angle 2 = 40^\circ$

c) $m\angle 3 = 65^\circ$

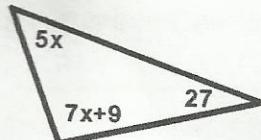
d) $m\angle 4 = 75^\circ$

e) $m\angle 5 = 115^\circ$



Find the value of x.

8) 12



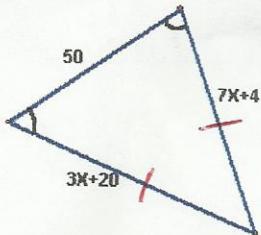
$$5x + 7x + 9 + 27 = 180$$

$$12x + 36 = 180$$

$$12x = 144$$

$$\boxed{x = 12}$$

10) 4



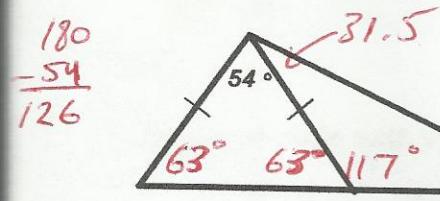
$$3x + 20 = 7x + 4$$

$$20 = 4x + 4$$

$$4x = 16$$

$$\boxed{x = 4}$$

12) 31.5



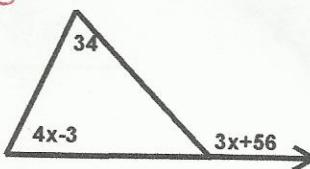
14) In the figure, $\angle 1 \cong \angle 2$. Find the measures of the numbered angles.

a) $m\angle 1 = 25^\circ$

b) $m\angle 2 = 25^\circ$

c) $m\angle 3 = 130^\circ$

9) 25



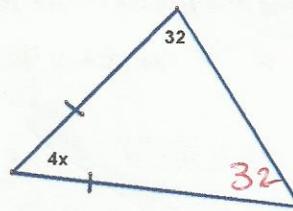
$$3x + 56 = 34 + 4x - 3$$

$$3x + 56 = 4x + 31$$

$$56 = x + 31$$

$$\boxed{x = 25}$$

11) 29

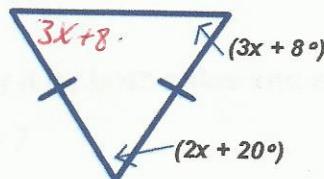


$$4x + 64 = 180$$

$$4x = 116$$

$$\boxed{x = 29}$$

13) 18



$$3x + 8 + 3x + 8 + 2x + 20 = 180$$

$$8x + 36 = 180$$

$$8x = 144$$

$$\boxed{x = 18}$$

