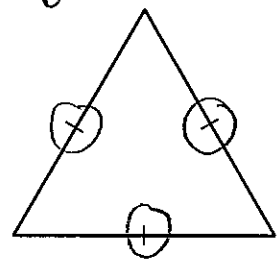
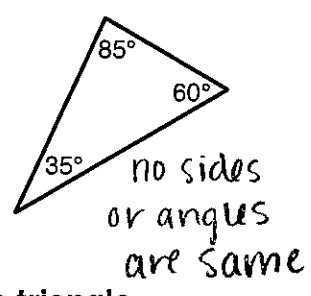
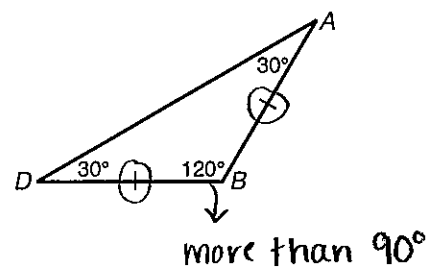


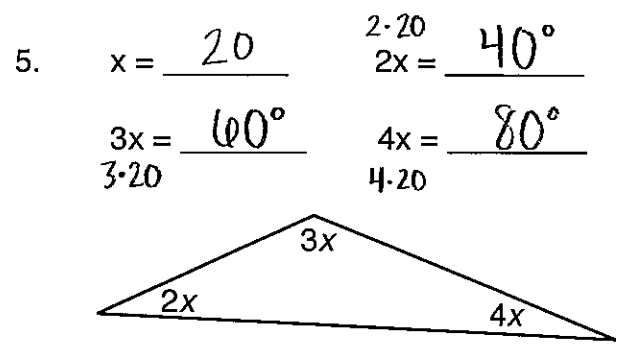
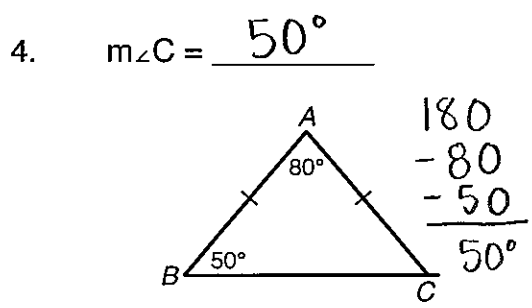
Chapter 4 Review Geometry C

Classify each triangle by angles (acute, obtuse, right, equiangular) & by the sides (scalene, isosceles, equilateral).

1. obtuse
isosceles
2. acute
scalene
3. equiangular
equilateral



Find the missing angle of each triangle.



$$\underline{2x} + \underline{3x} + \underline{4x} = 180$$

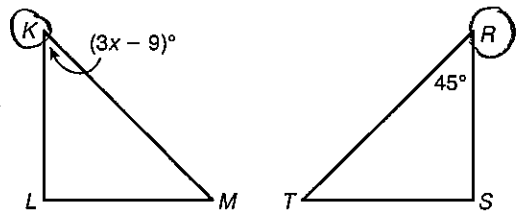
6. *order matters!*
 $\triangle HAM \cong \triangle PIX$. List all 6 pairs of congruent parts.

- | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| $\angle H \cong \angle P$ | $\angle A \cong \angle I$ | $\angle M \cong \angle X$ |
| $\overline{HA} \cong \overline{PI}$ | $\overline{AM} \cong \overline{IX}$ | $\overline{HM} \cong \overline{PX}$ |

$$\frac{9x}{9} = \frac{180}{9} \rightarrow x = 20$$

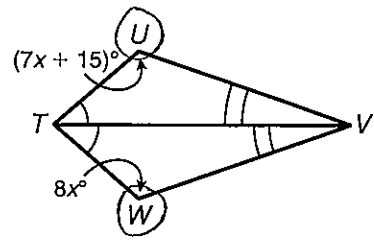
7. $\triangle KLM \cong \triangle RST$. Find the value of x .

$$\begin{array}{r} 3x - 9 = 45 \\ + 9 \quad + 9 \\ \hline 3x = 54 \\ \rightarrow \frac{3x = 54}{3} \quad \frac{54}{3} \\ x = 18 \end{array}$$

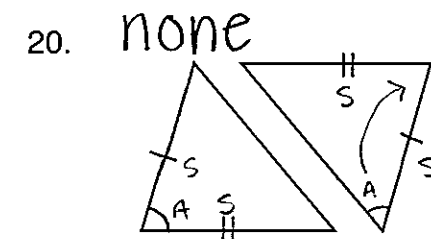
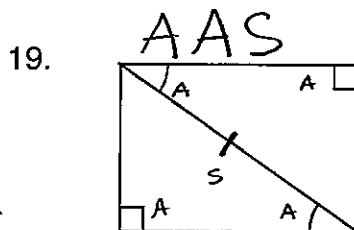
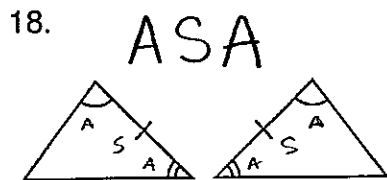
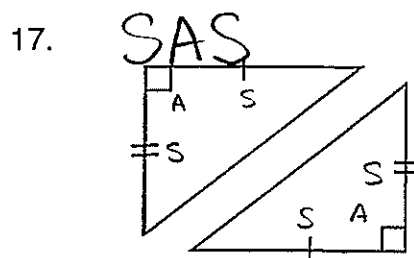
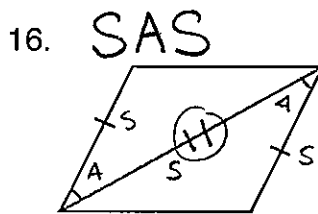
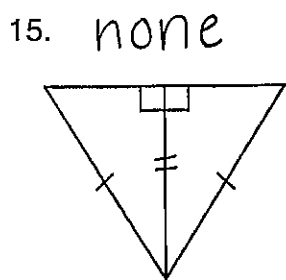
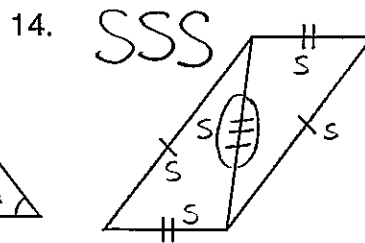
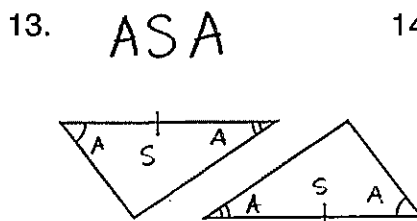
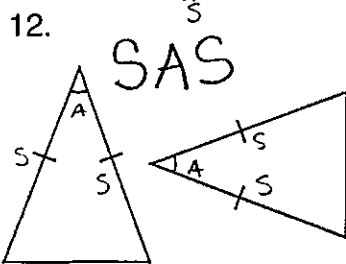
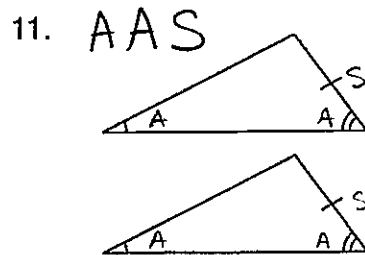
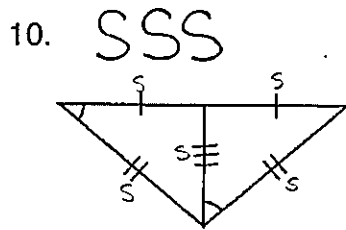
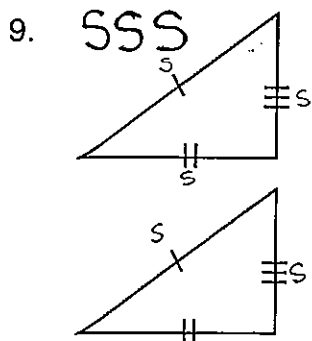


8. $\triangle TUV \cong \triangle TWV$. Find the value of x .

$$\begin{aligned}
 7x + 15 &= 8x \\
 -7x &\quad -7x \\
 15 &= 1x \\
 \boxed{x = 15}
 \end{aligned}$$



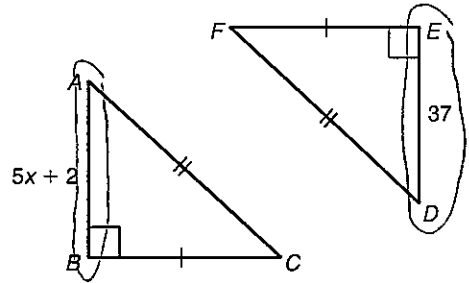
Identify which triangle congruence theorem will prove these triangles congruent. (SSS, SAS, ASA, AAS, or none)



21. $\triangle ABC \cong \triangle DEF$. Find the value of x .

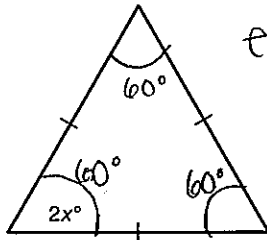
$$5x + 2 = 37$$

$$\begin{array}{r} 5x + 2 = 37 \\ -2 \quad -2 \\ \hline 5x = 35 \\ \frac{5x}{5} = \frac{35}{5} \\ x = 7 \end{array}$$



22. Use the figure below. Find the value of x .

$$x = 30$$



equilateral, so equiangular

$$180 \div 3 = 60^\circ \text{ each}$$

$$\frac{2x}{2} = \frac{60}{2}$$

$$x = 30$$

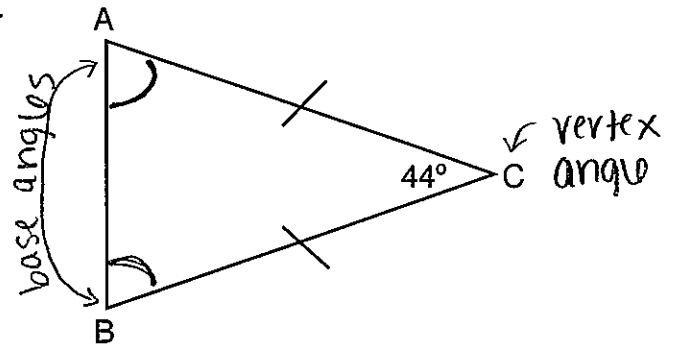
23. Use the figure below. Find the angles below.

a. $\angle A = 68^\circ$

b. $\angle B = 68^\circ$

$$180 - 44 = 136$$

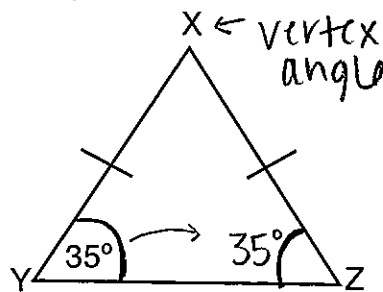
$$\frac{136}{2} = 68^\circ$$



24. Use the figure below. Find the angles below.

a. $\angle X = 110^\circ$

b. $\angle Z = 35^\circ$



$$180$$

$$- 35$$

$$- 35$$

$$\hline 110^\circ$$

25. Find the measure of each angle using the diagram below.

$\angle J = 60^\circ$

$\angle K = 60^\circ$

$\angle L = 60^\circ$

equilateral means also equiangular

$$180^\circ \div 3 = 60^\circ$$
