

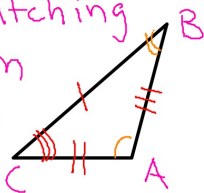
congruent figures



Figures that have the exact same size and shape.

corresponding parts

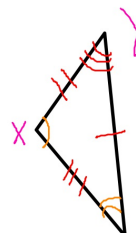
The matching parts on different figures



$$\overline{CB} \cong \overline{YZ}$$

$$\overline{CA} \cong \overline{ZX}$$

$$\overline{AB} \cong \overline{YZ}$$



$$\angle A \cong \angle X$$

$$\angle B \cong \angle Z$$

↑
symbols congruent

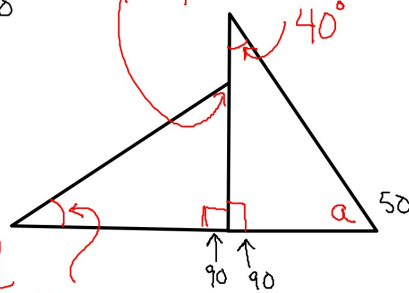
$$40 + 90 + a = 180$$

$$130 + a = 180$$

$$12x + 4y = 40$$

$$17x - y = 50$$

$$\begin{array}{r} 17x - y = 50 \\ +y \quad +y \\ \hline 17x = 50 + y \\ -50 \quad -50 \\ \hline 17x - 50 = y \end{array}$$



$$12x + 4(17x - 50) = 40$$

$$12x + 68x - 200 = 40$$

$$80x = 240$$

Properties of $\cong \Delta$'s

REFLEXIVE

$$\Delta ABC \cong \Delta ABC$$

SYMMETRIC

$$\Delta ABC \cong \Delta DEF \text{ then } \Delta DEF \cong \Delta ABC$$

TRANSITIVE

$$\Delta ABC \cong \Delta DEF$$

AND

$$\Delta DEF \cong \Delta GHI$$

$$\Delta ABC \cong \Delta GHI$$