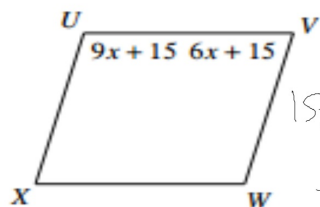


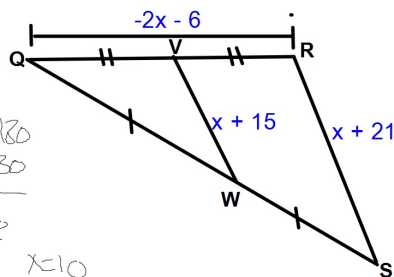
Warm-Up:

1) Solve for x.



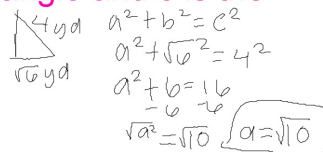
$$\begin{array}{r} 15x + 50 = 180 \\ -30 \quad -30 \\ \hline 15 \quad 150 \\ \hline 15 \quad 15 \quad x=10 \end{array}$$

2) Find WV.



3) If a and b are legs of a right triangle and c is the hypotenuse, find the length of a.

$b = \sqrt{6}$ yd $c = 4$ yd



$$\begin{aligned} a^2 + b^2 &= c^2 \\ a^2 + (\sqrt{6})^2 &= 4^2 \\ a^2 + 6 &= 16 \\ -6 \quad -6 \\ \hline a^2 &= 10 \quad a = \sqrt{10} \end{aligned}$$

16 What is the **approximate** length of the arc subtended by an angle of $\frac{4\pi}{3}$ radians on a circle with a radius of 6.00 meters?

A 12.57 meters

B 14.14 meters

C 25.13 meters

D 28.27 meters

$$\frac{2\pi r \theta}{360} \quad \frac{4\pi \cdot 180}{3 \cdot \pi} = 240$$

$$\frac{2 \cdot \pi \cdot 6 \cdot 240}{360} = 25.13$$

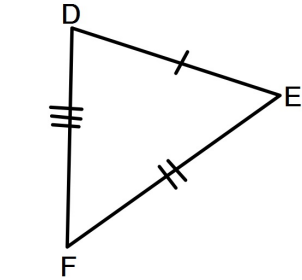
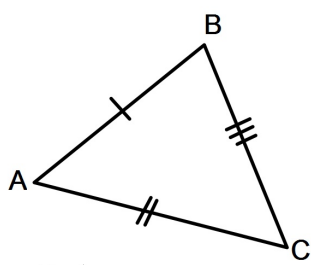
ACT/SAT Practice:

2) Point B lies on the line with equation $y - 8 = 4(x - 1)$. If the x-coordinate of B is 6, what is the y-coordinate of B?

Unit 1: Geometry
Objective: G.CO.10

Day 3 - Congruent Triangles

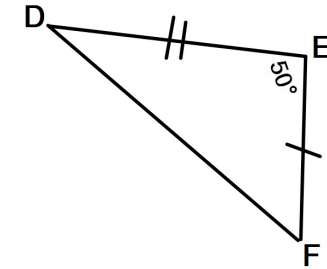
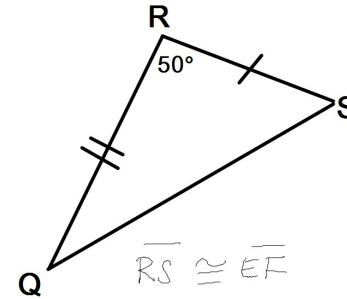
SSS (side-side-side): 3 sides in one Δ are \cong 3 sides in the other Δ



$$\begin{aligned}\overline{AB} &\cong \overline{DE} \\ \overline{AC} &\cong \overline{FE} \\ \overline{BC} &\cong \overline{DF}\end{aligned}$$

$$\triangle ABC \cong \triangle EDF$$

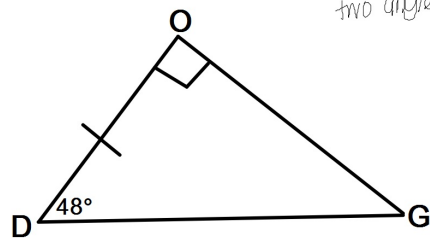
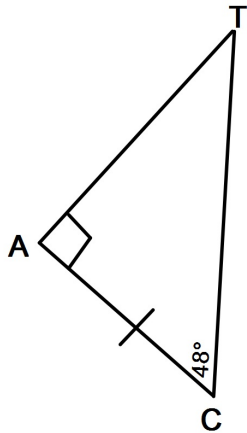
SAS (side-angle-side): angle is always between the two sides



$$\begin{aligned}\overline{RS} &\cong \overline{FE} \\ \angle R &\cong \angle E \\ \overline{QR} &\cong \overline{DE}\end{aligned}$$

$$\triangle SRQ \cong \triangle FED$$

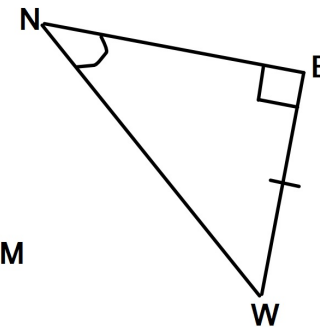
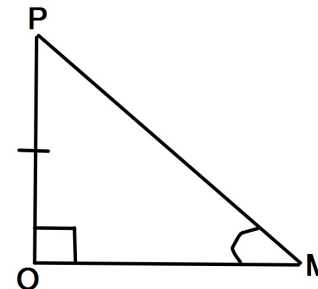
ASA (angle-side-angle): side is always between the two angles...



$$\begin{aligned}\angle C &\cong \angle D \\ \overline{AC} &\cong \overline{OD} \\ \angle A &\cong \angle O\end{aligned}$$

$$\triangle ACT \cong \triangle ODG$$

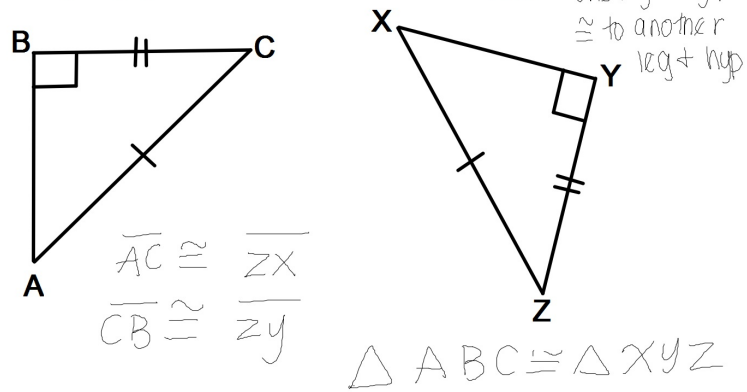
AAS (angle-angle-side): side is never between the two angles



$$\begin{aligned}\angle O &\cong \angle E \\ \angle M &\cong \angle N \\ \overline{PO} &\cong \overline{WE}\end{aligned}$$

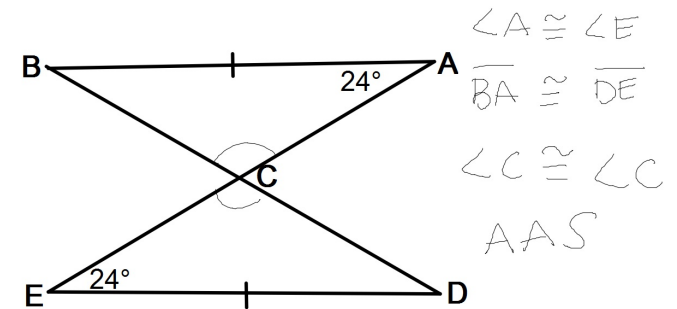
$$\triangle POM \cong \triangle WEN$$

HL (hypotenuse-leg): 2 right Δ 's one leg + hyp \cong to another leg + hyp



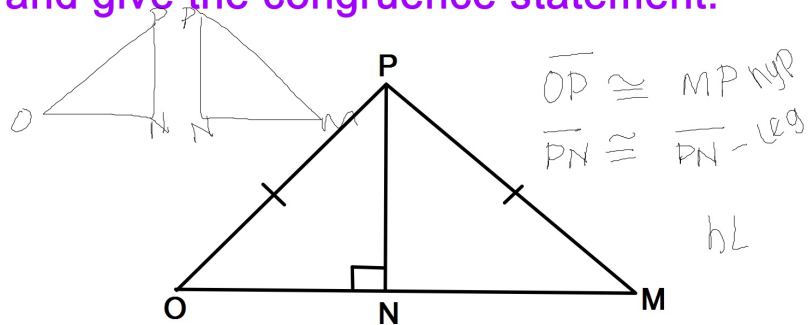
Example 1:

State how the two triangles are congruent and give the congruence statement.



Example 2:

State how the two triangles are congruent and give the congruence statement.



Example 3:

State how the two triangles are congruent and give the congruence statement.

