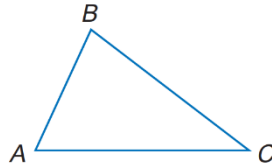


Parts of a Triangle: All triangles have _____ parts, _____ angles and _____ sides.

Name all the **parts** of the triangle:

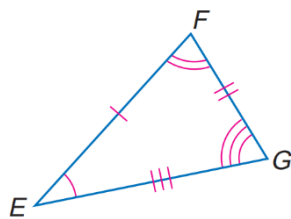
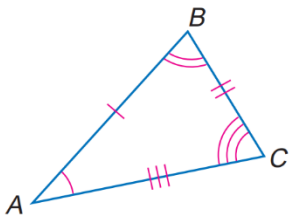


Sides: _____

Angles: _____

Two triangles are congruent if and only if the **corresponding** parts are congruent.

Write 6 congruence statements for the triangles: : Sides: _____



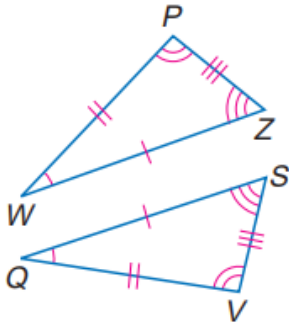
Angles: _____

Since all 6 pairs of **corresponding** parts of the triangles are congruent, then

$$\triangle BAC \cong \triangle \underline{\hspace{1cm}}$$

*the order of the letters matters!!!!

Ex 1: Complete the congruence statements for the diagram shown.



$$\triangle ZWP \cong \triangle \underline{\hspace{1cm}}$$

$$\triangle QSV \cong \triangle \underline{\hspace{1cm}}$$

$$\triangle WPZ \cong \triangle \underline{\hspace{1cm}}$$

Ex 2: Use the triangle congruence statement to write 6 congruence statements.

Hint: If two triangles are congruent then the **corresponding** parts of the triangles are congruent.

If $\triangle TUV \cong \triangle XYZ$ then

$$\underline{\hspace{1cm}} \cong \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \cong \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \cong \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \cong \underline{\hspace{1cm}}$$

$$\underline{\hspace{1cm}} \cong \underline{\hspace{1cm}} \quad \underline{\hspace{1cm}} \cong \underline{\hspace{1cm}}$$

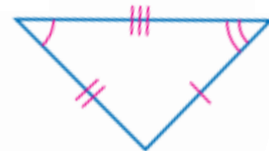
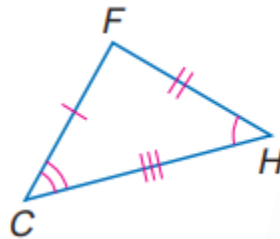
Ex 3: Complete the statement and label the triangle at right.

If

$$\begin{array}{ccc} \angle C \cong \angle J & \angle H \cong \angle L & \angle F \cong \angle K \\ \overline{CH} \cong \overline{JL} & \overline{HF} \cong \overline{LK} & \overline{FC} \cong \overline{KJ} \end{array}$$

then

$$\triangle \underline{\hspace{1cm}} \cong \triangle \underline{\hspace{1cm}}$$

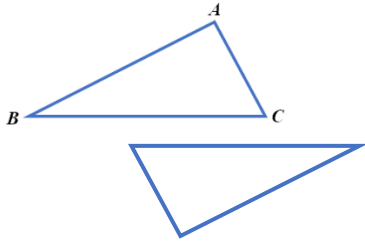


Make sure you understand the meaning of 'corresponding.'

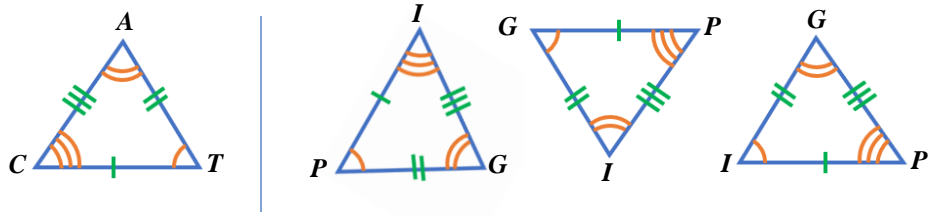
Add angle markings to $\angle F$ and the **corresponding** angle in the other triangle.

Ex 4: Understanding *corresponding* parts.

a) $\triangle CAB \cong \triangle LID$. Label $\triangle LID$ and add geometric markings to both triangles.



b) Which $\triangle PIG$ is congruent to $\triangle CAT$? Note: All four triangles are congruent, but only one of the $\triangle PIG$'s has the letters arranged so the corresponding parts are congruent.



Geometric Markings on Triangles: There are a few **3-letter codes** used to identify information on triangles.

SAS	SSA	SSS	ASA	AAS	AAA

Ex 5: Label each triangle with the appropriate letter combination:

a)	b)	c)	d)	e)	f)
g)	h)	i)	j)	k)	l)

Algebra Review:

Ex 6: Line a : $y = \frac{1}{2}x - 2$

a) Find the equation of the line b that is **parallel** to line a and passes through $(2, -3)$.

b) Find the equation line c that is **perpendicular** to line a and passes through $(2, -3)$.

c) Graph lines a , b , and c here.

