Objective:

Do Now:

1. In ΔABC, m∠A = 75°, m∠B=x+35, and m∠C=2x. Find the measure of x and of the missing angles:

(103-x)

2x°

(6x-7)

1. Find the measure of x and of the exterior angle.

**Congruent Triangles:**

If two triangles are congruent, their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Examples: Using the figures, decide which parts are congruent**

1. ΔABC  ΔDEF 2. Δ NPQ ΔBCD 3. QRST  WXYZ

Q Y X

R

T

Z W

S

A D

B C E F

N D C

P Q B

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_

**Examples: Using the names, decide which parts are congruent**

4. ΔABC  ΔXYZ 5. SWAT ABCD 6. ΔQRS  ΔXYZ

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_

**Practice: Using the figures, decide which parts are congruent**

1. BAGS  HURT 2. ΔBAT  ΔDOG 3. CART  BUGS

G

B

A T D O

T

H

B S U

A G R

T

A

C R

U

T

B G

S

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_

**Practice: Using the names, decide which parts are congruent**

4. TRCX  VGHM 5. ΔBAT  ΔDOG 6. JHGF  QWRT

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_

**Practice: Find the missing measurements in these CONGRUENT figures:**

7. BATS  DOGY 8. ΔBAG  ΔHOT 9. MARSPICK

M A

S R

C K

I P

12

5

B A

T

G

O H

B A

S T

D O

Y G

23

5

5

5

60°

140° 140°

30°

40° 40°

4

45

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_