

BE - Geometry 1 Tuesday 10-12-10

① Solve by factoring:  $5x^2 + 7x + 2 = 0$

② Solve using the QF:  $6x^2 - 5x + 1 = 0$

①  $5x^2 + 7x + 2 = 0$

sum = 7

prod = 10

2 5

$$(5x^2 + 2x) + (5x + 2) = 0$$

$$x(5x + 2) + 1(5x + 2) = 0$$

$$(5x + 2)(x + 1) = 0$$

$$\therefore x = \left\{ -\frac{2}{5}, -1 \right\}$$

②  $6x^2 - 5x + 1 = 0$

$a = 6$       $b^2 - 4ac$

$b = -5$       $(-5)^2 - 4(6)(1)$

$c = 1$       $25 - 24 = 1 = d$

$$x = \frac{-b \pm \sqrt{d}}{2a} = \frac{5 \pm 1}{12}$$

$$\therefore x = \left\{ \frac{1}{2}, \frac{1}{3} \right\}$$

1.

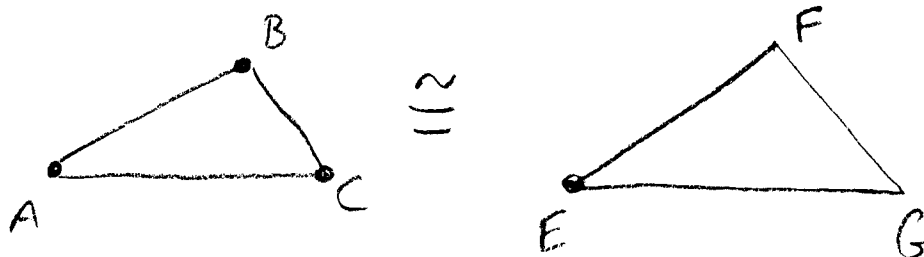
Triangles that are the same size  
and shape are Congruent Triangles  
(Ch. 4-3 C.T.)

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Each corresponding angle and side is  
congruent in a C.T.

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(Ex)



$$\angle A \cong \angle E$$

$$\angle B \cong \angle F$$

$$\angle C \cong \angle G$$

$$\overline{AB} \cong \overline{EF}$$

$$\overline{BC} \cong \overline{FG}$$

$$\overline{AC} \cong \overline{EG}$$

CPCTC

KNOW THIS!

When naming  $\cong \Delta$ 's, corresponding  $\angle$ s must match

(Ex)  $\Delta ABC \cong \Delta EFG$

OR  $\Delta BCA \cong \Delta FGE$

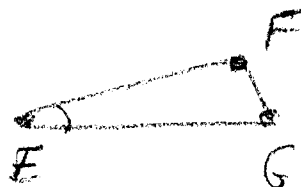
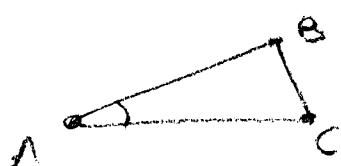
OR  $\Delta CAB \cong \Delta GEF$

NOT  $\Delta ABC \cong \Delta FGE$  (NOT CORRECT)

DEFINITION (Pg 192)

2  $\Delta$ 's are  $\cong$  iff corr. parts are  $\cong$

NOTE: IN  $\cong \Delta$ 's,  $\cong \angle$ s ARE OPPOSITE  $\cong$  SIDES

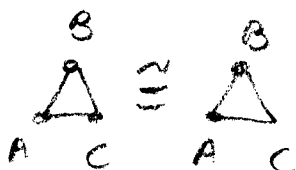


$\angle A \cong \angle E$  ,  $\overline{BC} \cong \overline{FG}$

Theorem 4.4 Properties of  $\Delta \cong$

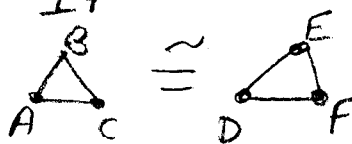
REFLEXIVE

A  $\Delta$  is  $\cong$  to itself

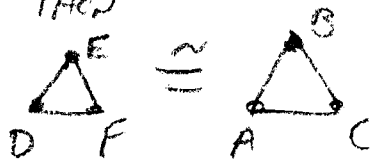


SYMMETRIC

IF

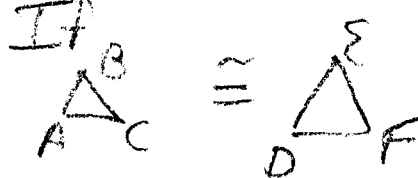


THEN



TRANSITIVE

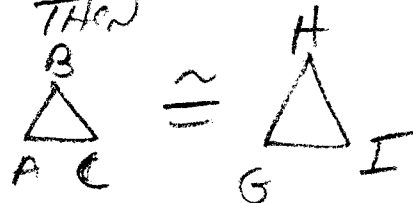
IF



AND



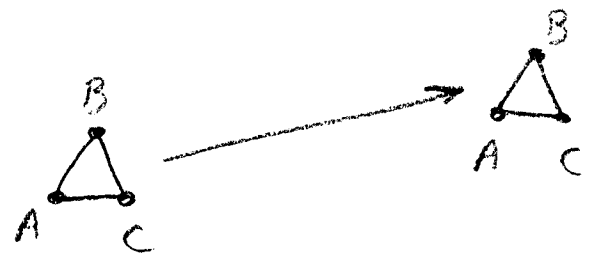
THEN



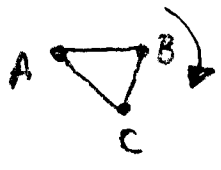
Congruence Transformations } Do NOT change size or shape

Vocabulary Terms! Know These Tomorrow!

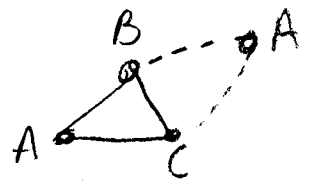
TRANSLATE (SLIDE)



ROTATE (TURN)



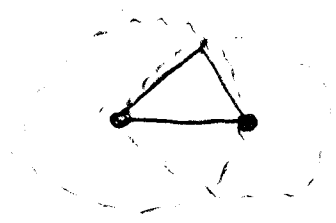
REFLECTION (Flip)



CAN flip by a combination of rotation & translation

CONSTRUCTION: ON A GIVEN LINE SEGMENT, CONSTRUCT AN EQUILATERAL Δ

Euclid's Proposition 1



Homework: Pg 195 # 3-5, 9-12