BE - Geometry 11

Monday 10-17-11

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

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

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① $5x^2 + 7x + 2 = 0$

Sum = 7
prod = 10
2 5

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

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

$(5x+2)(x+1) = 0$ $\therefore \boxed{x = \left\{-\frac{2}{5}, -1\right\}}$

② $6x^2 - 5x + 1 = 0$

$a = 6$
$b = -5$
$c = 1$

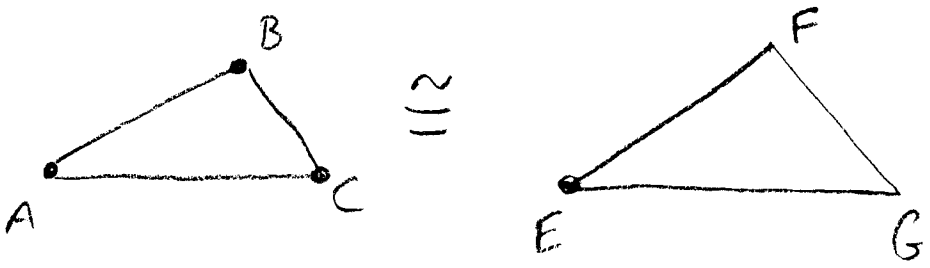
$b^2 - 4ac$
$(-5)^2 - 4(6)(1)$
$25 - 24 = \boxed{1 = d}$

$x = \frac{-b \pm \sqrt{d}}{2a} = \frac{5 \pm 1}{12}$ $\therefore \boxed{x = \left\{\frac{1}{2}, \frac{1}{3}\right\}}$

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

Each corresponding $\angle$ and side is congruent in $\cong$ C.T.

(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 $\cong$ $\triangle$'s, corresponding $\angle$s must match

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

or $\triangle BCA \cong \triangle FGE$

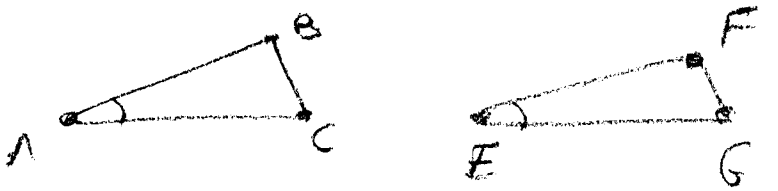
or $\triangle CAB \cong \triangle GEF$

NOT $\triangle ABC \cong \triangle FGE$ (NOT correct)

DEFINITION (Pg 192)

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

NOTE: IN $\cong \triangle$'s, $\cong$ $\angle$s are opposite $\cong$ sides

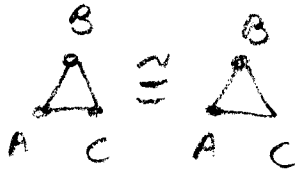


$\angle A \cong \angle E$, $\overline{BC} \cong \overline{FG}$

Theorem 4.4 Properties of $\triangle \cong$

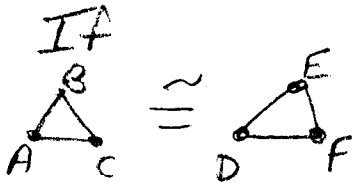
Reflexive

A $\triangle$ is $\cong$ to itself

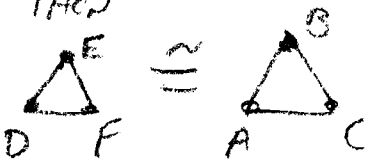


Symmetric

If

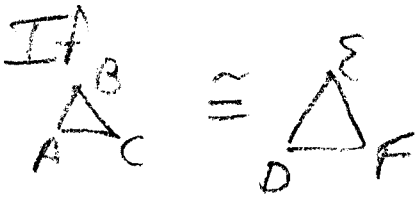


Then



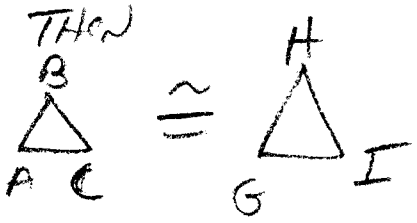
Transitive

If



AND

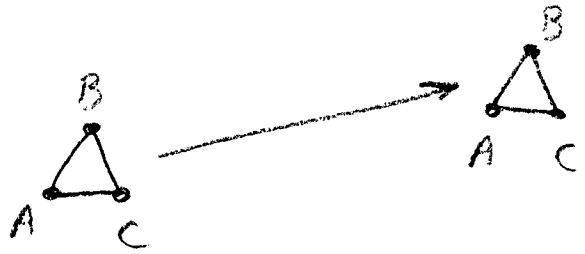
Then



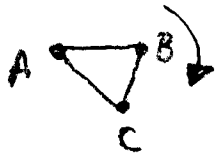
Congruence Transformations } Do not change size or shape

Vocabulary Terms! Know These Tomorrow!

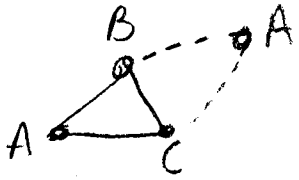
Translate (slide)



Rotate (turn)



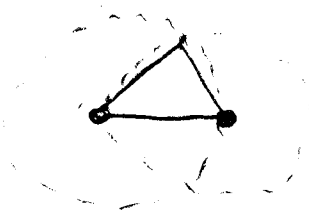
Reflection (flip)



Can flip by a combination of rotation & translation

Construction: On a given line segment, construct an equilateral △

(Euclid's Proposition 1)



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