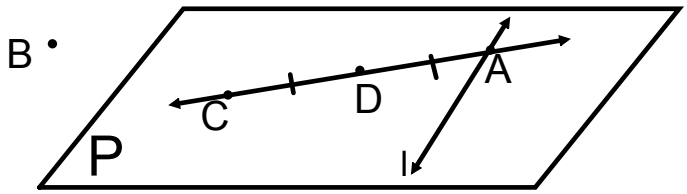
Bellwork:

Give an example of what can and cannot be assumed by the diagram.



Chapter 2.5: Reason Using Properties of Algebra

- Check out page 105 in text book for properties.

addition: if a=b then a+c=b+c

subtraction: if a=b then a-c=b-c

multiplication: if a=b then ac=bc

division: if a=b then $\frac{a}{c} = \frac{b}{c}$

substitution: if a=b then a can be replaced with b.

distributive: a(b+c)=ab+ac

solve with reasons.

$2x+5=20-3x$	Given
$+3x \quad +3x$	
$5x+5=20$	+ prop of =
$-5 \quad -5$	
$5x=15$	− prop of =
$x=3$	÷ prop of =

solve with reasons:

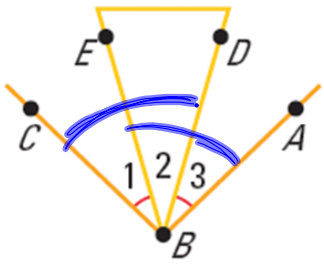
$-4(11x+2)=80$	Given
$-44x-8=80$	dist. prop.
$-44x=88$	+ prop of =
$x=-2$	÷ prop of =

Reflexive(same): a=a or AB=AB or <Z=<Z

Symmetric(backwards): a=b then b=a or AB=CD then CD=AB

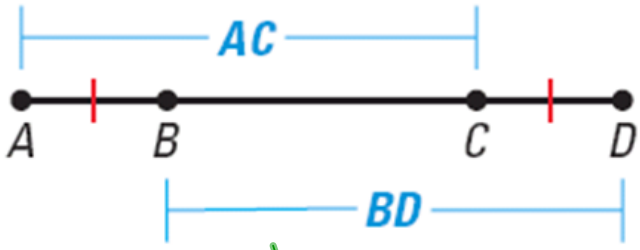
Transitive(link): a=b, b=c then a=c

You are designing a logo. Use the information give to determine if m<EBA=m<DBC



$\angle 1 \cong \angle 3$	given
$\angle 1 + \angle 2 = \angle CBD$	angle + prop
$\angle 2 + \angle 3 = \angle EBA$	angle + prop
$\angle 2 + \angle 3 = \angle CBD$	substitution prop
$\angle EBA \cong \angle CBD$	Transitive prop

In the diagram, AB=CD. Show that AC=BD



$AB = CD$	Given
$BC = BC$	Reflexive
$AB + BC = CD + BC$	+ prop of =
$AC = BD$	substitution

Homework: Chapter 2.5 pg.108
#'s 4,6-16e,22,24,35