

s	j	t	$\sim t$	$s \wedge j$	$(s \wedge j) \vee \sim t$
T	T	T	F	T	20. <u>?</u> T
* T	T	F	13. <u>?</u> T	T	T
* T	<u>F</u>	T	<u>F</u>	<u>F</u>	21. <u>?</u> F
* T	<u>F</u>	F	T	17. <u>?</u> F	T
* <u>F</u>	T	T	14. <u>?</u> F	F	22. <u>?</u> F
* F	T	F	15. <u>?</u> T	F	23. <u>?</u> T
* F	F	T	F	18. <u>?</u> F	F
10. <u>?</u> F	11. <u>?</u> F	12. <u>?</u> F	16. <u>?</u> T	19. <u>?</u> F	24. <u>?</u> T

Sep 13-1:42 PM

Geometry

Chapter 2

Section 2-5

May 13-10:02 PM

Properties from Algebra

Addition Property

If $a = b$, then $a + c = b + c$.

Subtraction Property

If $a = b$, then $a - c = b - c$.

Multiplication Property

If $a = b$, then $a \cdot c = b \cdot c$.

Division Property

If $a = b$ and $c \neq 0$, then $\frac{a}{c} = \frac{b}{c}$.

Reflexive Property

$$\underline{a = a}$$

The Distributive Property

$$a(b + c) = ab + ac$$

Transitive Property

If $a = \underline{b}$ and $\underline{b} = c$, then $a = c$.

Substitution Property

If $a = b$, then b can replace a in any expression.

Sep 6-3:49 PM

Algebra Properties Applied to Geometry

Reflexive Property

$$\overline{AB} \cong \overline{AB} \quad \angle A \cong \angle A$$

Transitive Property

If $\overline{AB} \cong \overline{CD}$ and $\overline{CD} \cong \overline{EF}$, then $\overline{AB} \cong \overline{EF}$.

If $\angle A \cong \angle B$ and $\angle B \cong \angle C$, then $\angle A \cong \angle C$.

If $\angle B \cong \angle A$ and $\angle B \cong \angle C$, then $\angle A \cong \angle C$.

Sep 6-4:01 PM

Proof	Convincing argument using deductive reasoning
★ Two-Column Proof	Proof that lists all statements in left column and justification for each statement in the right column.

Sep 6-3:48 PM

Two-column Proof: Algebra Problems	
Statements	Reasons
$4(x + 6) = 32$	Given
$4x + 24 = 32$	Distribution Property
$4x = 8$	Subtraction Property
$x = 2$	Division Property

Sep 6-3:51 PM

Two-column Proof: Algebra Problems

Statements	Reasons
$4(x + 6) = 32$	Given
$x + 6 = 8$	Division Property
$x = 2$	Subtraction Property

Sep 6-3:51 PM

Justifications in Proofs

Given (a statement or from a diagram)

Properties (mostly from algebra)

Postulates (accepted statements, from book)

Definitions (biconditionals, can be used 2 ways)

Theorems (proven rules, from book)

Sep 6-4:01 PM

Two-column Proof: Geometry	
Statements	Reasons
$AB = 2, \overline{AB} \cong \overline{BC}, \overline{BC} \cong \overline{XY}$ $\overline{AB} \cong \overline{XY}$ $XY = 2$ $BC = 2$	<p style="color: red;">Given</p> <p style="color: pink;">Transitive Property</p> <p style="color: green;">Definition of \cong</p>

Sep 6-3:51 PM

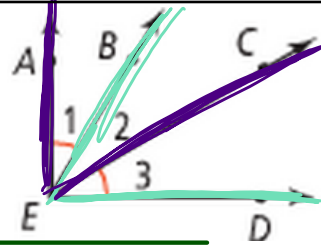
Algebra What is the value of x ? Justify each step.

$\angle AOM$ and $\angle MOC$ are supplementary.	Given
$m\angle AOM + m\angle MOC = 180$	Definition of supplementary \triangle
$(2x + 30) + x = 180$	Substitution Property
$3x + 30 = 180$	Simplify
$3x = 150$	<u>Subtraction Property of Equality</u>
$x = 50$	Division Property of Equality

Sep 6-3:51 PM

Given: $m\angle 1 = m\angle 3$

Prove: $m\angle AEC = m\angle DEB$



Statements	Reasons
$m\angle 1 = m\angle 3$	Given
$m\angle 1 + m\angle 2 = m\angle 2 + m\angle 3$	Addition Property
$m\angle 1 + m\angle 2 = m\angle AEC$ $m\angle 2 + m\angle 3 = m\angle DEB$	Angle Addition Postulate
$m\angle AEC = m\angle DEB$	
	Substitution

Sep 6-4:21 PM

Homework

Page 117-118

5, 6, 8 - 13 all, 16 - 21 all, 23 - 25 all

May 13-10:02 PM