

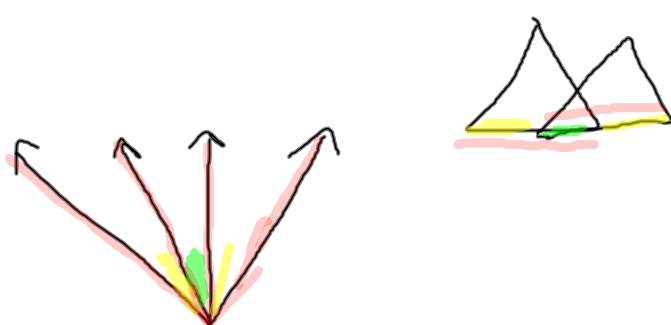
Multiplication & Division Postulate

Tonight's HW: finish Addition/Subtraction Packet

Test 11/8, Quarterly 11/9

Nov 3-7:55 AM

Homework Review



Nov 3-7:55 AM

3-8 THE MULTIPLICATION AND DIVISION POSTULATES

The Multiplication Postulate

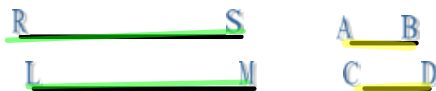
If $a = b$, and $c = d$, then $ac = bd$.
 If equals are multiplied by equals, the products are equal.
 Doubles of equal quantities are equal.

The Division Postulate

If $a = b$, and $c = d$, then $\frac{a}{c} = \frac{b}{d}$ ($c \neq 0$ and $d \neq 0$).
 If equals are divided by nonzero equals, the quotients are equal.
 Halves of equal quantities are equal.

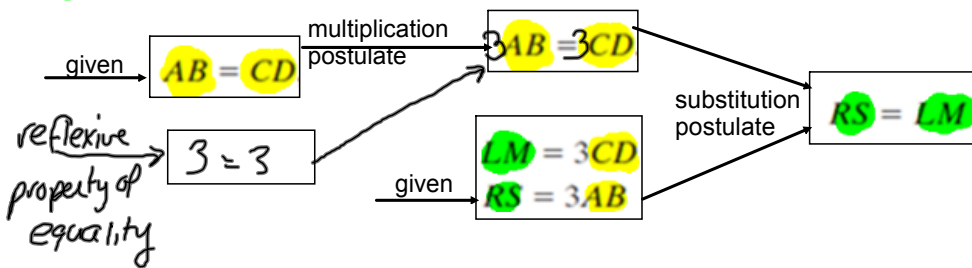
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EXAMPLE 1



Given: $AB = CD$, $RS = 3AB$, $LM = 3CD$

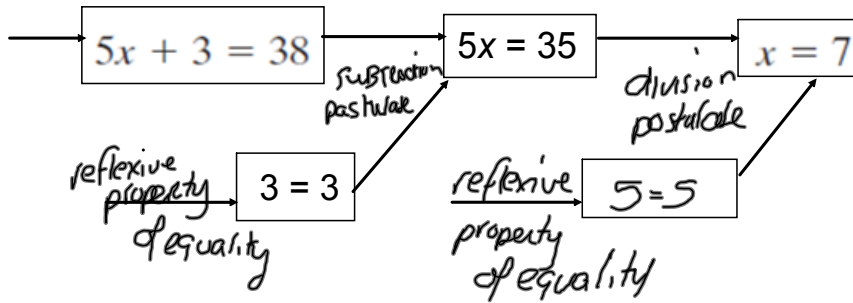
Prove: $RS = LM$



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Given: $5x + 3 = 38$

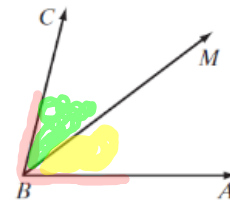
Prove: $x = 7$



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Given: $m\angle ABM = \frac{1}{2}m\angle ABC$, $m\angle ABC = 2m\angle MBC$

Prove: \vec{BM} bisects $\angle ABC$.



reflexive property of equality $2 = 2$

given $m\angle ABC = 2m\angle MBC$

division postulate $\frac{1}{2}m\angle ABC = m\angle MBC$

given $m\angle ABM = \frac{1}{2}m\angle ABC$

substitution postulate

$m\angle ABM = m\angle MBC$

congruent segments have equal measures

$\angle ABM \cong \angle MBC$

an angle bisector divides an angle into two congruent angles

\vec{BM} bisects $\angle ABC$.

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Powers Postulate

If $a = b$, then $a^2 = b^2$.

The squares of equal quantities are equal.

If $AB = 7$, then $(AB)^2 = (7)^2$, or $(AB)^2 = 49$.

The Multiplication and Division Postulates **125**

Roots Postulate

If $a = b$ and $a > 0$, then $\sqrt{a} = \sqrt{b}$.

Recall that \sqrt{a} and \sqrt{b} are the positive square roots of a and of b , and so the postulate can be rewritten as:

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Homework:

- ~~Amsco Geometry:~~
- ~~Pages 126-127 (3-5)~~

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