

**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**

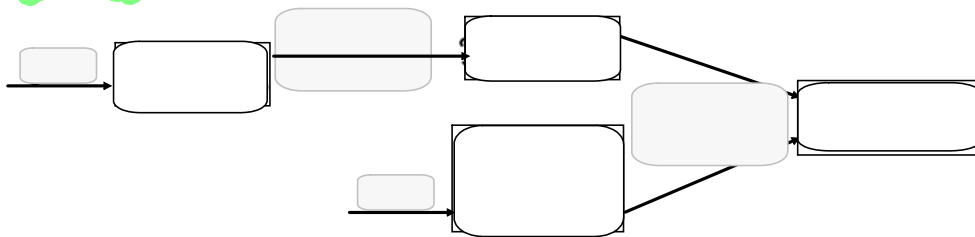
If  $a = b$ , and  $c = d$ , then  $\frac{a}{c} = \frac{b}{d}$  ( $c \neq 0$  and  $d \neq 0$ ).  
 If equals are divided by nonzero equals, the quotients are equal.  
 Halves of equal quantities are equal.

**EXAMPLE 1**



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

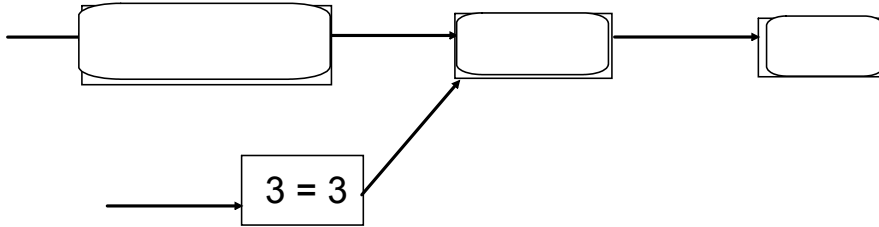
Prove:  $RS = LM$



Multiplication, Division, Doubles, Halves.notebook

Given:  $5x + 3 = 38$

Prove:  $x = 7$



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

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

