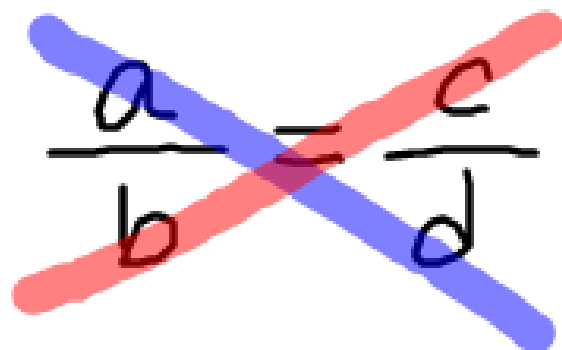# 2 - 8
Proportions and Scale Drawings

proportion: an equation stating that two ratios are equivalent

$$\frac{1}{2} = \frac{3}{6}$$

Written different ways:

$$\frac{1}{2} = \frac{3}{6} \qquad 1:2 = 3:6$$

Cross Products

$$\frac{a}{b} = \frac{c}{d}$$

$$a \cdot d = b \cdot c$$

Are the following proportions?

Ex: $\dfrac{3}{4}$ ✗7 $\dfrac{21}{28}$

×7

84   84

yes

Ex: $2 : 7 = 6 : 10$

×3

$\dfrac{2}{7} = \dfrac{6}{10}$

×3

42   no   20

Complete the proportions.

Ex: $\dfrac{1}{2} = \dfrac{\star}{8}$ ④

×4

$2x \quad ×4 \quad 8$

Ex: $\dfrac{12}{\star} = \dfrac{4}{3}$ ⑨

×3

$4x \quad ×3 \quad 36$

Ex: $\dfrac{11}{\star} = \dfrac{44}{80}$ ⑳

÷4

÷4

Ex: The scale of a painting is 1 in : 3 ft. Find the drawing length that would be used to represent an actual length of 12 ft.

$$\frac{1 \text{ in}}{3 \text{ ft}} = \frac{x \text{ in}}{12 \text{ ft}}$$

$$\boxed{4 \text{ in}}$$

$$3x = 12$$

$$x = 4$$

In-Class / Homework:

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