

Journal Entry:

Read through the Getting Ready; Solve It problem on pg. 124 and answer.

Section 2 - 7
Solving Proportions

Students will be able to:
-solve and apply proportions

Proportion: an equation that states that two ratios are equal.

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

a is to b as c is to d

Solve using Multiplication:

$$\frac{x}{7} = \frac{4}{5} \cdot \frac{7}{1}$$

$$x = \frac{28}{5}$$

Cross Products Property

$\frac{a}{b} = \frac{c}{d}$ and b, d are not 0; then $ad = bc$

Example: $\frac{2}{3} = \frac{4}{6}$ ✓

$2 \cdot 6 = 3 \cdot 4$
 $12 = 12$ ✓

a, d are the extremes
 b, c are the means

Solve using the cross product property:

$\frac{y}{3} = \frac{3}{5}$

$y \cdot 5 = 3 \cdot 3$
 $5y = 9$
 $\frac{5y}{5} = \frac{9}{5}$
 $y = \frac{9}{5}$

Solve:

$\frac{x-2}{3} = \frac{x+3}{5}$

$5(x-2) = 3(x+3)$

$5x - 10 = 3x + 9$
 $-3x + 10 -3x + 10$

$2x = 19$
 $\frac{2x}{2} = \frac{19}{2}$

$n = \frac{2n+4}{5}$

$5n = 2n+4$
 $5n = 10n+20$

$-4n = 20$
 $n = -5$

An 8-oz can of OJ contains about 97 mg of vitamin C. About how many milligrams of vitamin C are in a 12-oz. can?

$\frac{97}{8} = \frac{x}{12}$

145.5mg

Dan Meyers Video:
Nana's Chocolate Milk

#37. Approximately 3 people out of every 30 are left-handed. About how many left-handed people would you expect in a group of 140 people?

$$x = 14 \quad \frac{3}{30} = \frac{x}{140}$$

In this class?

$$\frac{x}{14} = \frac{3}{30} \quad x = 1$$

#55.

~~$$\frac{4y-3}{y^2+1} = \frac{4}{y}$$~~

$$(4y-3) \cdot y = 4(y^2+1)$$

~~$$4y^2 - 3y = 4y^2 + 4$$~~
~~$$-4y^2 \quad -4y^2$$~~

$$-3y = 4$$

Hwk:

pg. 127 - 129

#10 - 34 every 4th,

38, 40, 42 - 50 every 4th,

52, 54, 55, 56