3-9 Proportions

ratio - comparison of 2 numbers (often expressed as a fraction.)

proportion - two equal ratios

Solve

$$\frac{x}{21} \diagup \frac{3}{7}$$

$$\frac{7x}{7} = \frac{63}{7}$$

$$x = 9$$

$$\frac{4}{7} \diagup \frac{24}{x}$$

$$\frac{4x}{4} = \frac{168}{4}$$

$$x = 42$$

If a car moving at a constant speed travels 55 miles in 2 hours, how many miles will it travel in 7 hours?

Let $M = miles$

$$\frac{miles}{hours} = \frac{55}{2} \diagdown \diagup \frac{M}{7} = \frac{2M}{2} = \frac{385}{2}$$

$$M = 192.5 \text{ miles.}$$

p. 150
2-24 evens
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