



Name _____

IF . . . , THEN . . . PROPORTIONS

Application problems that involve rates can be solved using proportions. Be certain to write both ratios in the same order.

Ex. If 3 cans of beans cost \$1.29,
then how much will 5 cans cost?

$$\begin{array}{rcl} \underline{3 \text{ cans}} & = & \underline{5 \text{ cans}} \\ \$1.29 & & n \\ 3n & = & 6.45 \\ n & = & \$2.15 \end{array}$$

If 3 tea bags are used to make a
gallon of tea, then how many are
needed to make 2 1/2 gallons?

$$\begin{array}{rcl} \underline{3 \text{ bags}} & = & \underline{n \text{ bags}} \\ 1 \text{ gallon} & & 2\frac{1}{2} \text{ gallons} \\ 7\frac{1}{2} \text{ bags} & = & 1n \end{array}$$

Write a proportion and solve.

1. If 18 copies cost \$1.08, then 30 copies will cost how much?
2. If the truck used 25 gallons to travel 375 miles, how far can it go with four gallons?
3. If two microchips in a batch of 500 are defective, how many in a batch of 2,500 will probably be defective?
4. If a truck driver estimates that it will take 12 hours to travel 624 miles, then how long will it take to go 260 miles?
5. If a player gets 54 hits in 225 at bats, then how many hits are expected in 500 at bats?
6. If 4 ounces of cheese cost \$1.85, then how much will a pound cost? (Hint: How many ounces equal 1 pound?)
7. If two computer games cost \$24.90, then how much will five games cost?
8. If ribbon costs \$2.50 for 20 inches, then how much does a yard of ribbon cost?
9. If your heart beats 8 times in 6 seconds, then how many times will it beat in 2 minutes?
10. If a canary's heart beats 130 times in 12 seconds, then how many times will it beat in 2 minutes?