

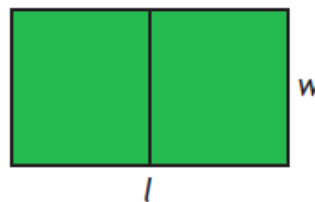
Linear Word Problems

Writing an equation to relate the unknowns and using that equation to solve for pairs of information.

(Be sure to identify what each unknown represents.)

David is a dog breeder and needs to construct two identical, adjacent rectangular pens to contain the male and female puppies. He has 24 m of fencing material available.

What are some possible configurations for the pens?



Finding the Rate of Change (slope) in a Word Problem

(looking for "pairs" of information)

Julien's parents are hiring a caterer for his brother's graduation party. They found the advertisement to the right in the newspaper. They wonder what the cost per person would be if they used Fred's catering service.

Fred's Fine Foods

Number of Guests	Total Cost (\$)
10	250
30	650
45	950
80	1650

Finding the equation of the relationship
to solve the larger problem.

Steve is paid \$12 an hour plus a flat fee of \$20.00 for working at the mall during the Christmas Season rush.

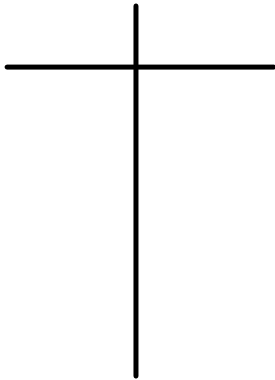
Write an equation that models Steve's earnings. Create a table of values if necessary to help you determine the equation.

How much does Steve make if he works 6.5 hours?

Steve made \$134.00 in one day. How many hours did he work?

A computer technician collected some data from two of her service calls. She was paid \$85 for 2 hours of work on call #1, and \$160 for 5 hours of work.

What would a 12.25 hr service call cost?



Ken's Kanine Kennel provides suites that dogs in the same family can share. Ken's charges a room fee for the family plus an additional amount for each dog. One day's stay costs \$71 for 2 dogs and \$113 for 5 dogs. Julie wants to know the daily cost to board her 3 dogs.

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The speed of sound in air can be calculated based on temperature using a linear relation. At 10°C the speed of sound is 337.4 m/s , and at 21.5°C the speed is 344.3 m/s . What is the speed of sound when the temperature is 32.3°C ?