

Problem Solving Lab

A good rule of thumb in solving a word problem is to spell out and understand every detail and relationship that looks like it might have a bearing on the answer, so that you gradually come to comprehend the relationships between all the relevant variables. Work step-by-step and very carefully.

**Word Problems Involving Arithmetic**

The problems in this section do not require the use of algebra or geometry. The only math necessary is arithmetic. However, the problems do require careful and complete analysis in deciding which arithmetic computations to use. With each problem, take time to think through and picture the situation described. Don't just jump to some computation that may or may not be appropriate.

**Problem 1**

One light flashes every 2 min. and another light flashes every 7 min. If both lights flash at 1 P.M., what is the first time after 3 P.M. the same day that both lights flash together?

**Problem 2**

The front wheel of a bicycle is four times as large as the rear wheel, and the rear wheel makes 1 complete revolution each time the pedals make  $\frac{1}{3}$  of a revolution. How many revolutions do the front wheels make when the pedals make 8 revolutions?

**Problem 3**

City P is 295 mi. away from city Q. A car starts from city P at 1 P.M. and travels toward city Q at 50 mph. Another car starts from city Q at 1:30 P.M. and travels toward city P at 40 mph. At what time do the cars pass one another?

**Problem 4**

Twenty men did  $\frac{1}{4}$  of a job in 8 days. Then, because of an emergency, it became necessary to complete the job in the next 5 days. How many additional men were added to the crew of 20 to accomplish this?

**Problem 5**

A salesman traveled at 60 mph while making a 120-mi. trip to a client, then returned home at 40 mph. What was his average speed for the round trip?

Draw a diagram, fill a table... just solve those problem.

Type your detailed answer using problem solving steps. Upload before the end of the lab period.