

**Math 152 Extra Word Problems Section 1.2 Lesson #12**

1) The church has an old press that produces copies at a cost of 11 cents each. Since the press is paid for, they are reluctant to buy a new copier at a price of \$7,700 which produces copies at a cost of 4 cents each. What should they do? They print about 2000 copies each week.

2) Joan wishes to start a new business of making custom gift baskets and delivering them. Her fixed costs will be \$378 each month for advertising, telephone service and office supplies. Each basket will cost \$11.50 for materials and delivery. How many baskets does she need to sell at a price of \$25 to break even?

3) Jim can shovel the driveway by himself in 3 hours. With Tom's help, they can shovel the driveway in only 2 hours. How long would Tom need to shovel the driveway by himself?

4) A hose can fill a tank in 4 hours. The same tank will drain in 5 hours. How long will it take the tank to fill if the hose is on and the drain is open?

5) A lab worker needs 6 liters of 20% alcohol solution. A 10% solution is mixed with a 60% solution. How many liters of the 60% solution will be required?

6) A lab worker needs 5 liters of 20% alcohol solution. A 10% solution is mixed with a 60% solution. How many liters of the 10% solution will be required?

7) A car leaves a rest stop at 2:00 pm and averages 55 mph driving north. A second car leaves the same rest stop at 3:00 pm and averages 60 mph driving north. At what time does the second car overtake the first car?