Ratio and Proportion Problems

1. Find the unknown value in each of the following proportions:
   a) $15:7 = g:21$ b) $12:8 = 30:h$ c) $2:3:4 = 8:x:y$ d) $5:x:15 = 10:20:y$

2. The dimensions of a rectangle are in the ratio 3:7. If the width is 18 cm, what is the length?

3. A brass alloy contains copper and zinc in the ratio 20:7. How much copper would be in an alloy with 84 kg of zinc?

4. Francine walked 5 km in the same time it took Lidwin to run 11 km. How far will Francine walk in the time it takes Lidwin to run 25 km? (Answer to 1 dec. place)

5. Construction companies bid for jobs in a process called tendering. The Blacktop Paving Company is successful in getting 7 jobs out of every 20 bids.
   a) How many jobs will this company get if it makes 100 bids?
   b) How many bids should the company have in order to get 100 jobs?

6. Elaine and Kasmir share a $2500 prize in the ratio 3:2. How much money should they each receive?

7. A piece of rope 36 m long is cut into 2 pieces in the ratio 4:5. How long is each piece?

8. A hockey player has a total record of 90 points earned based on goals and assists. If his ratio of goals to assists is 7:3, how many goals did he get?

9. A used car lot has cars, trucks and vans in the ratio 6:3:2. If they have 21 trucks, how many cars and vans are there?

10. Fletch, Hammy And Enos share in a business in the ratio 4:3:1. If their profits were $450 000 in 1996, how much money does each partner receive?

11. The school store orders track suits in sizes small, medium and large in the ratio 2:5:4. How many of each type would be in an order of 396 suits?

12. The ratio of nickels to dimes to quarters in a sum of money is 3:4:5. What is the *value* of the money if there are 144 coins? (Hint: Two-part solution!)