

EQUATION PROBLEMS

- 1) The sum of three consecutive numbers is 72. What are these numbers?
- 2) The width of a rectangle is 5 metres less than its length. The area is 84 square metres. Find the dimensions of the rectangle.
- 3) The product of two consecutive odd integers is 1 less than twice their sum. Find the two integers.
- 4) One leg of a right triangle is one centimetre shorter than the other leg. If the hypotenuse is 5 cm, find the length of the shorter leg.
- 5) The product of two consecutive negative integers is 1260. What are the numbers?
- 6) We make a path to walk around a garden which measured 12 m by 16 m. The total area increases to 285 square metres. What is the width of the pathway?
- 7) A lady has some 50-cent and 2-euro coins in her purse. She has 90 coins in all and their total value is €105. How many 2€ coins does she have?
- 8) We want to obtain a solution that is 12% boric acid by mixing 4 litres of a mixture containing 15% acid with another mixture with 6% acid. How much of the 6% solution must we use?
- 9) The owner of a sweet shop mixes two types of sweets. She decides to create a 20-pound mixture of raspberry-flavored gumdrops and cherry-flavored jelly beans. The gumdrops sell for \$0.95 per pound, and the jelly beans sell for \$1.20 per pound. She plans to sell the mix for \$1.10 per pound. How many pounds of each sweet must she use in her mix?
- 10) A father is 28 years older than his daughter. In 2 years' time he will be 3 times as old as his daughter. How old are they now?
- 11) The perimeter of a rectangle is 28 metres. The base is 6 metres longer than its height. Work out the sides and the area of the rectangle.
- 12) Calculate the measure of the three angles of a triangle if the first is three times the second and this is twice the third.
- 13) Martha's age is a third of Bob's, and in 30 years' time she will be 10 years younger than him. How old are they now?

- 14) A father is 40 years old and his son is 18. How many years ago was the father's age triple his son's age?
- 15) Two people have got the same amount of money. The first person spends \$35 and the second spends \$22. The second person now has twice as much money as the first. How much money did they have at the beginning?
- 16) The perimeter of a rectangle is 24m. The area is 27m^2 . Find its dimensions.
- 17) A train covers the distance between two cities A and B at 70 km/h in a certain time. If it goes 10km/h faster, it will cover the same distance in one less hour. Find the distance between the two cities and the time it takes to do the first trip.
- 18) A chemist wants to make 40 litres of 22.5% acid solution. She is mixing a 10% acid and a 30% acid solution. How many litres of each does she need?
- 19) A hotel has double rooms and single rooms. In total there are 80 rooms and 145 beds. How many rooms are there of each type?
- 20) Anne is counting the money in the cash register at the end of the day. She has \$1,015 in \$5 bills and \$10 bills. If she has 138 bills all together, how many of each type does she have?
- 21) 353 people attend a local play at a private club. Members get tickets for \$2.75, while non-members have to pay \$6.50. If the total money they all pay is \$1,762, how many members and non-members are there in the club?