



Linear Equations - set samples - paper 1

1. A family swimming session costs £22 while an individual session costs £20. A leisure centre had ninety bookings and collected £1848 in total. How many family sessions were booked?

ans _____

2. A large bag of apples costs £8 while a small bag costs £6. A market stall sold ninety-five bags in total and the total takings were £716. How many large bags were sold?

ans _____

3. A weekday parking ticket costs £9 while a weekend ticket costs £3. Fifty-seven tickets were issued and the car park collected £303. How many weekday tickets were issued?

ans _____



Linear Equations - set samples - Answers

1. Let (f) be the number of family sessions and (i) the number of individual sessions.

$$f + i = 90$$

$$22f + 20i = 1848$$

Substitute ($i = 90 - f$):

$$22f + 20(90 - f) = 1848$$

$$22f + 1800 - 20f = 1848 \rightarrow 2f + 1800 = 1848$$

$$2f = 48 \rightarrow f = 24$$

24 family sessions.

2. Let (l) be the number of large bags and (s) the number of small bags.

$$l + s = 95$$

$$8l + 6s = 716$$

Substitute ($s = 95 - l$):

$$8l + 6(95 - l) = 716$$

$$8l + 570 - 6l = 716 \rightarrow 2l + 570 = 716$$

$$2l = 146 \rightarrow l = 73$$

73 large bags.

3. Let (w) be the number of weekday tickets and (e) the number of weekend tickets.

$$w + e = 57$$

$$9w + 3e = 303$$

Substitute ($e = 57 - w$):

$$9w + 3(57 - w) = 303$$

$$9w + 171 - 3w = 303 \rightarrow 6w + 171 = 303$$

$$6w = 132 \rightarrow w = 22$$

22 weekday tickets.