Where 2 lines cross

Past Paper Simultaneous Equations Type Questions Intermediate 2

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Q1. Solve algebraically the system of equations.

$$2x + 6y = 24 \quad (A)$$
$$5x + 3y = 24 \quad (B)$$

(3 marks)

Q2. A jeweller uses two different arrangements of beads and pearls.

The first arrangement consists of 2 beads and 6 pearls and has an overall length of 9.4 centimetres.

The second arrangement consists of 5 beads and 4 pearls and has an overall length of 11.4 centimetres.

Find the length of **one** bead and the length of **one** pearl.

(6 marks)

Q3. A sports centre charges different entrance fees for adults and children.

(a) One evening 3 adults and 6 children visited the sports centre.

The total collected in entrance fees was £ 71.10

Let £ x be the adult's entrance fee and £ y be the child's entrance fee.

Write down an equation in x and y which represents the above condition. (1 mark)

(b) The following evening 6 adults and 3 children visited the sports centre.

The total collected in entrance fees was £ 84.60

Write down an equation in x and y which represents the above condition. (1 mark)

(c) Calculate the entrance fee for an adult and the entrance fee for a child.

(4 marks)

Q4. Seats on flights from London to Glasgow are sold at two prices, £ 40 and £ 90 .

On one flight a total of 80 seats were sold.

Let x be the number of seats sold at £ 40 and y be the number of seats sold at £ 90 .

Write down an equation in x and y which satisfies the above condition. (1 mark)

The sale of the seats on this flight totalled £ 5700

(b) Write down a second equation in x and y which satisfies this condition. (1 mark)

(c) How many seats were sold at each price? (4 marks)

Q5. At an amusement park, the Green family buy 3 tickets for the ghost train and 5 tickets for the sky ride.

The total cost is £ 14.80 .

Let £ x be the cost of a ticket for the ghost train and £ y be the cost of a ticket for the sky ride.

Write down an equation in x and y which represents the above condition.

(1 mark)

(b) The Black family bought 6 tickets for the ghost train and 2 tickets for the sky ride.

The total cost for the tickets was £ 16.00

Write down an equation in x and y which satisfies the above condition.

(1 mark)

(c) Find the cost of a ticket for the ghost train and the cost for the sky ride.

(4 marks)