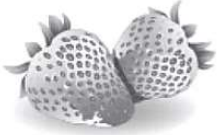



Intermediate Numeracy Summer 2019 P1 Q1

In this question, you will be assessed on the quality of your organisation, communication and accuracy in writing.

Sioned works in a grocery shop.
She has made a poster for the window of the shop.

| | |
|---|---|
|  Strawberries £8.60 per kg |  Raspberries Today's special offer per kg |
|---|---|

Sioned has forgotten to write the price of raspberries on the poster.

Mr Thomas buys $\frac{1}{4}$ kg of strawberries and $1\frac{1}{2}$ kg of raspberries.

He pays with a £20 note.




He gets £2.55 change.

Calculate the price of 1 kg of raspberries.

You must show all your working.

[6 + 2 OCW]

Intermediate Numeracy Sam 1 P2 Q1c

| | |
|---|----------------------|
|  | Grapes £3.40 per kg |
|  | Bananas £2.70 per kg |
|  | Apples £1.80 per kg |

- (c) The price of peaches is not given in the table.
Rowena buys 0.4kg of grapes and 0.5kg of peaches.
It costs her £3.46 altogether.
What is the price of 1kg of peaches?

[3]

Intermediate Numeracy Nov 2017 P1 Q3

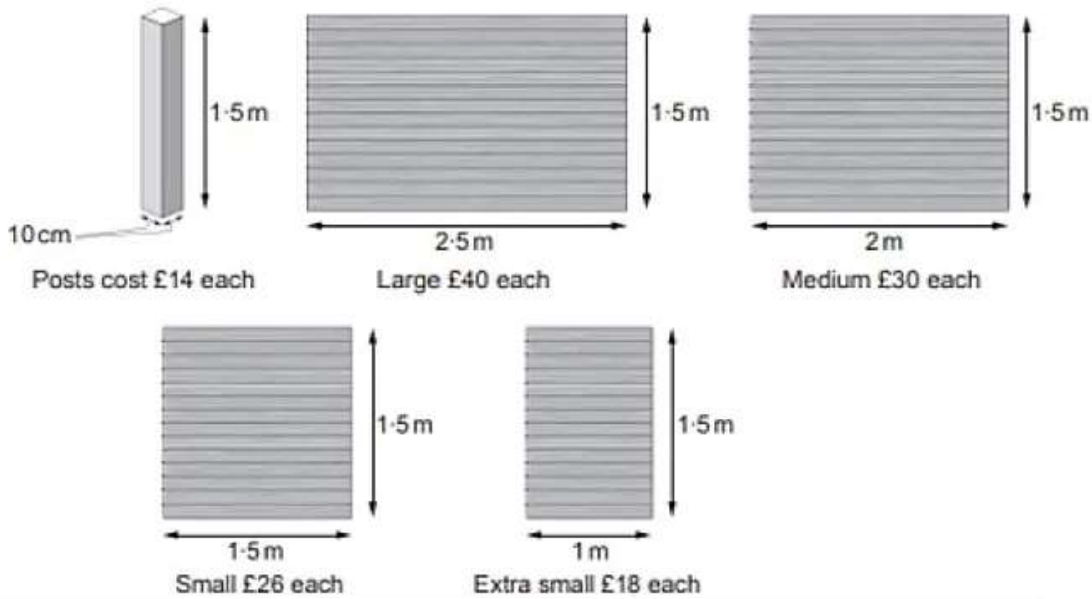
Mehmet needs a new fence for one end of his garden.
Fences are constructed using panels and posts.



- (a) Posts are needed between each fence panel and at both ends. How many posts are needed for a fence made with 34 panels? Circle your answer.

[1]

- (b) Mehmet wants a new 1.5 m high fence for his garden. The fence panels come in different lengths. The posts Mehmet wants to use are all the same size. Mehmet has the following information.



The fence Mehmet wants to make is 8.5 m long, including the posts. He has started to sketch a plan, as shown below.

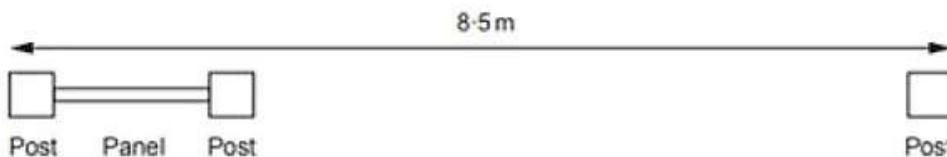


Diagram not drawn to scale

Mehmet needs to use 5 posts. Work out **one** possible choice of panels that Mehmet could use. You may use the plan to help you. Calculate the total cost of the posts and panels for this choice of fence.

[6]

- (c) It costs 2p to paint each 100 cm² of a fence post. How much will it cost to paint the 4 vertical sides of 1 fence post?

[3]

Intermediate Numeracy Summer 2018 P2 Q3

Emrys, Layla and Rhys go shopping together for fruit. They buy pears and apples from a market stall.

Emrys buys 3 pears and 1 apple for £1.22.



Layla buys 3 apples for 78p.



Rhys buys 5 pears and 2 apples.



How much change will Rhys receive from £5 when paying for 5 pears and 2 apples? [6]

Intermediate Numeracy Summer 2019 P1 Q5b

(b) Pairs of shoes are packed in shoeboxes. The dimensions of the shoebox used are given on the diagram below.

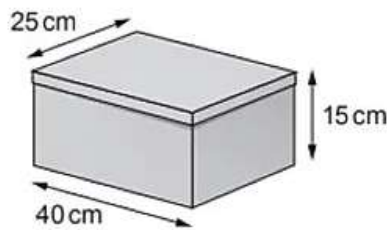


Diagram not drawn to scale

(i) What is the area of the smallest face of the shoebox? Circle your answer.

[1]

- 40 cm² 225 cm² 375 cm² 800 cm² 1000 cm²

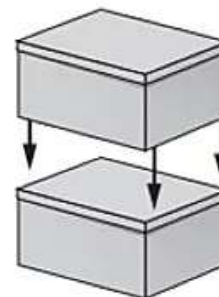
(ii) A customer orders 2 pairs of shoes.

The package for sending the shoes to the customer is made by:

- placing one box on top of the other, and
- taping the two boxes together.

This is shown in the diagram.

The cost for sending the package is calculated using the formula below. All dimensions are measured in cm.



$$\text{Cost in } \pounds = \frac{1}{5} \times (S + F) \times 0.02$$

S = value of the sum of the 3 dimensions of the package

F = value of the area of one of the **largest** faces of the package

How much does it cost *Rupert Shoes* to send the package? Give your answer in pounds. You must show all your working.

[5]

Intermediate Numeracy Nov 2018 P1 Q5

A badge is made using a metal button, a pin and sticky tape.

Lulu's Craft Shop

Pack of 42 metal buttons, only £2.50 

Bag of 24 pins, only £1.10 

60cm roll of sticky tape, 52p 

- (a) Elwyn decides to buy metal buttons and pins to make badges, so that there are no metal buttons or pins left over. He wants to buy the least possible number of packs of metal buttons and bags of pins.
- (i) Show that Elwyn should buy 4 packs of metal buttons and 7 bags of pins. You must show all your working. [2]
 - (ii) What is the maximum number of badges Elwyn can possibly make using 4 packs of metal buttons and 7 bags of pins? [1]
- (b) Each pin is stuck on to a metal button using approximately 2.5 cm of sticky tape. Elwyn plans to sell the badges to make the maximum profit possible.
- (i) How many rolls of sticky tape should Elwyn buy? [3]
 - (ii) Elwyn sells all the badges he makes for 50p each. Calculate the maximum profit he would make. [5]

Intermediate Numeracy Nov 2017 P2 Q5

A newspaper report claimed the following:

- 12% of the world population is left-handed.
- Twice as many men as women are left-handed.
- 30% of the world population is mixed-handed. Mixed-handed people prefer to use the left hand for some tasks and the right hand for others.
- It is very rare to be ambidextrous, that is being able to do all tasks equally well with either hand.

In 2011, Wales had a population of 3 063 000.

In 2014, Wales had a population of 3 092 000.

- (a) Calculate the number of left-handed people living in Wales in 2011. State what assumption you have made. [3]

- (b) In 2011, Wales had a population of 3 063 000.
1 559 000 of these people were women.

In 2011, what **percentage** of the population of Wales were **men**?
Give your answer correct to 1 decimal place.

[3]

- (c) How many mixed-handed people do you think were living in Wales in 2014?
You must show your working.
Give your answer to the nearest 1000 people.

[2]

- (d) A country of 6 million people meets all the claims given in the newspaper report.
8% of the women in this country are left-handed.

There are 3 million men living in this country.

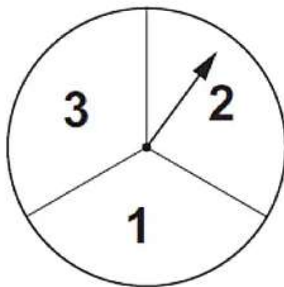
How many left-handed men would you expect there to be in this country?

[4]

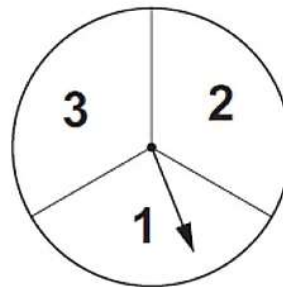
Intermediate Maths Nov 2017 P1 Q6

Sara is in charge of a game at her school's Christmas party.

Two fair spinners are spun as shown in the example below.



1st Spinner



2nd Spinner

People can make a two-digit number using the numbers shown on the spinners using the following rule:

Multiply the number on the first spinner by 10 and then add the number on the second spinner.

One example, as shown above, makes the number 21, because $2 \times 10 + 1 = 21$.

- (a) How many different numbers can be made playing this game? [1]
- (b) Write down all the prime numbers that can be made playing this game. [2]
- (c) What is the probability that a person makes a prime number when playing the game once? [2]
- (d) Sara charges each person £1 to play the game once.
Each player who makes a prime number from their spins wins £2.
How much profit would the school expect to make when 180 people play the game? [4]

Intermediate Numeracy Summer 2018 P1 Q8b

Mr Graham is building a garage.

A concrete mixer lorry holds a maximum load of 6 m^3 of concrete.
There is a fixed standard delivery charge of £35 per load.
The concrete costs £45 per m^3 .



Mr Graham orders $\frac{2}{3}$ of the maximum load of concrete for the base of his garage floor.

What is the total cost of Mr Graham's order?

[4]

Intermediate Numeracy Summer 2018 P1 Q9



Olga took out a high-interest loan for £400.
She paid back £49 per month for 20 months to clear the loan.
Calculate the total interest that Olga paid as a percentage of the original loan.

[4]

Intermediate Numeracy Sample 1 P1 Q11

In a factory, Machine A is three times as quick as Machine B in assembling identical circuit boards.

Machine A is allocated two and a half times as many of these circuit boards to assemble as Machine B.

Machine B took 4 hours to assemble all of its allocation.

How long did it take for Machine A to complete its allocation?
Give your answer in hours and minutes.

[4]

Intermediate Maths June 2017 P1 Q14

In this question, you will be assessed on the quality of your organisation and communication.

A **whole** number is written on a card.

You are given three clues to help you work out the number on the card.

Clue 1 : **Double** the number is between 8 and 18 inclusive.

Clue 2 : The number is a prime number.

Clue 3 : The number is **not** a factor of 100.

What is the number on the card?
You must show all your working.

[3 + 1 OC]