

Answer ALL TWENTY SIX questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 The table shows the height, in metres, of each of seven volcanoes.

Volcano	Height (metres)
Acamarachi	6046
Bazman	3490
Dona Juana	4150
Kamen	4585
Mount Ararat	5137
Ojos del Salado	6893
Semeru	3676

- (a) Which of these volcanoes has the greatest height?

.....  
(1)

- (b) Write down the value of the 8 in the number 4585

.....  
(1)

- (c) Write the number 6046 in words.

.....  
(1)

- (d) Write the number 5137 correct to the nearest hundred.

.....  
(1)

- (e) Work out the difference in the height of the Acamarachi volcano and the height of the Semeru volcano.

..... metres  
(1)

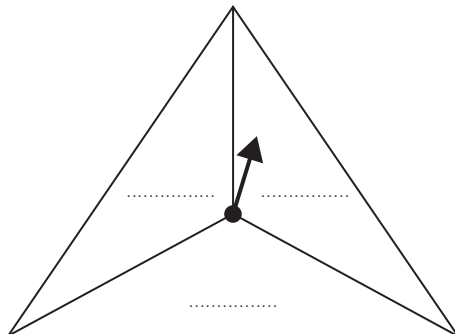
(Total for Question 1 is 5 marks)



2 Sandeep is designing some 3-sided spinners.

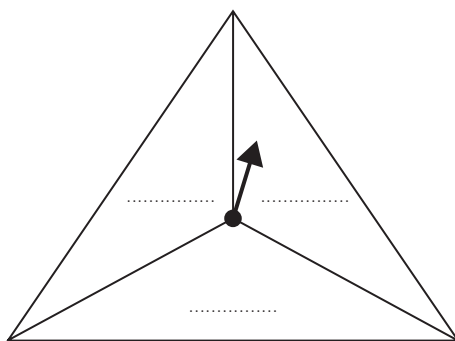
He is going to spin each spinner once.

- (a) (i) Write a different number on each dotted line so that when the spinner is spun it is **impossible** that the spinner will land on a number greater than 9



(1)

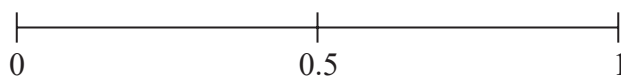
- (ii) Write a different number on each dotted line so that when the spinner is spun it is **certain** that the spinner will land on a multiple of 10



(1)

The likelihood of an outcome is **evens**.

- (b) On the probability scale, mark with a cross (X) the probability of this outcome.



(1)

(Total for Question 2 is 3 marks)



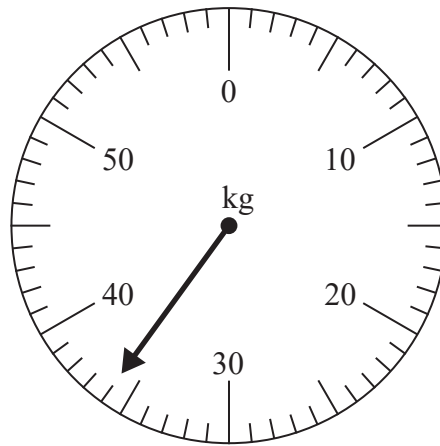
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3 Amir is going on holiday.

He weighs his suitcase on the weighing scales at the airport.  
The reading on the scale gives the weight of Amir's suitcase.



An excess luggage charge has to be paid when the weight of a suitcase is greater than 25 kg.

This charge is 7.45 euros for each kilogram over the 25 kg limit.

Work out the excess luggage charge that Amir has to pay.

..... euros

**(Total for Question 3 is 3 marks)**



4 (a) Write 0.57 as a fraction.

.....  
(1)

(b) Write 0.02 as a percentage.

.....%

(1)

(c) Write  $\frac{72}{84}$  as a fraction in its simplest form.

.....  
(1)

(d) Write  $\frac{22}{5}$  as a mixed number.

.....  
(1)

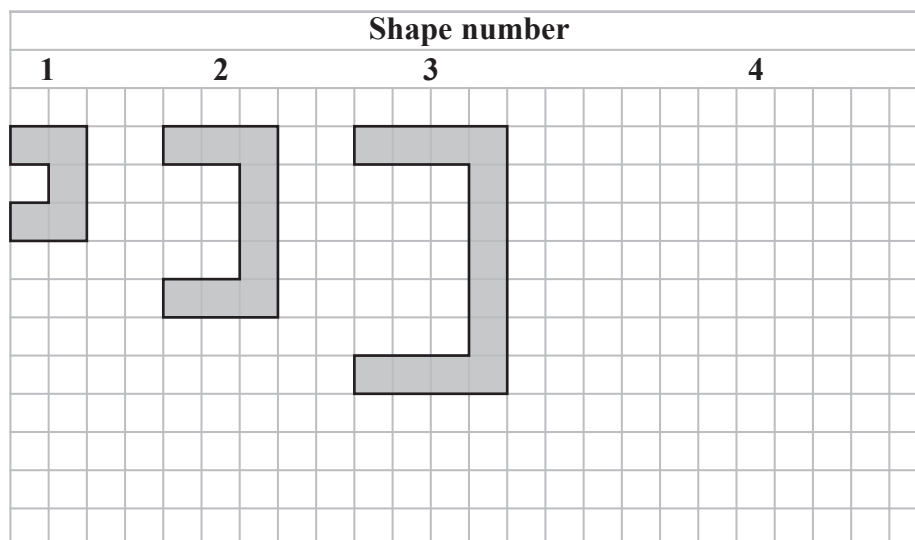
(e) Work out  $\frac{1}{8}$  of 624

.....  
(1)

(Total for Question 4 is 5 marks)



- 5 A sequence of shapes is made by shading squares on a square grid.



- (a) On the grid, draw Shape number 4

(1)

- (b) Complete the table.

Shape number	1	2	3	4	5
Number of shaded squares	5	9	13		

(1)

- (c) Find the number of shaded squares in Shape number 8

.....  
(1)

- (d) Explain why no shape in the sequence is made by shading exactly 50 squares.

.....  
.....  
(1)

(Total for Question 5 is 4 marks)



6 Nav makes bracelets using cord.

Nav has a 6 metre length of cord.

Each bracelet needs 17.5 cm of cord.

Work out the greatest number of bracelets that Nav can make.

.....  
(Total for Question 6 is 3 marks)

7 (a) Simplify  $10x + 4y + 3x - 6y$

.....  
(2)

(b) Solve  $2n + 5 = 16$

$n =$  .....  
(2)

(Total for Question 7 is 4 marks)



- 8 The two-way table shows some information about the 60 noodle meals eaten in a noodle bar by each of 60 people last Friday.

**Type of noodle**

	<b>Ramen</b>	<b>Soba</b>	<b>Udon</b>	<b>Total</b>
<b>Boiled</b>	18			31
<b>Fried</b>		12	7	
<b>Total</b>			15	60

- (a) Complete the two-way table.

(3)

One of the 60 people is selected at random.

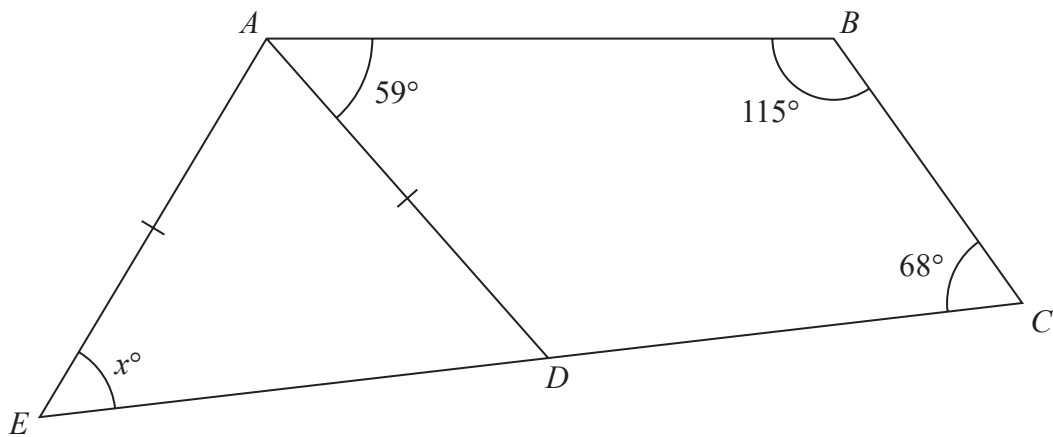
- (b) Write down the probability that this person ate Fried Udon noodles.

.....  
(1)

(Total for Question 8 is 4 marks)



- 9 The diagram shows quadrilateral  $ABCD$  and isosceles triangle  $ADE$ , where  $AE = AD$ .



$EDC$  is a straight line.

Work out the value of  $x$ .

Give a reason for each stage of your working.

$x = \dots\dots\dots$

(Total for Question 9 is 4 marks)

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