

10 Anjali wants to go on a boat at the seaside.

At the seaside there are 20 boats.

Of these boats

2 are white

5 are blue

7 are green

6 are yellow

Anjali selects at random one of these boats.

Write down the probability that she selects

(i) a green boat,

.....
(1)

(ii) a white boat or a yellow boat.

.....
(2)

(Total for Question 10 is 3 marks)



11 Johan wants to make some small cakes.

He finds a recipe that says he needs 360 grams of flour to make 15 small cakes.

Johan has 0.85 kg of flour.

Johan works out how much flour he would need to make 38 small cakes, using the information given in the recipe.

Does Johan have enough flour, according to the recipe, to make 38 small cakes?
Show your working clearly.

(Total for Question 11 is 4 marks)

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- 12 The table gives information about the number of gold stars won by each of 25 students in class 7T last week.

Number of gold stars	Number of students
0	6
1	5
2	4
3	7
4	3

- (a) Work out the mean number of gold stars won.

.....
(3)

A student in class 8R is to be chosen at random.

The probability that this student won at least one gold star last week is 0.39

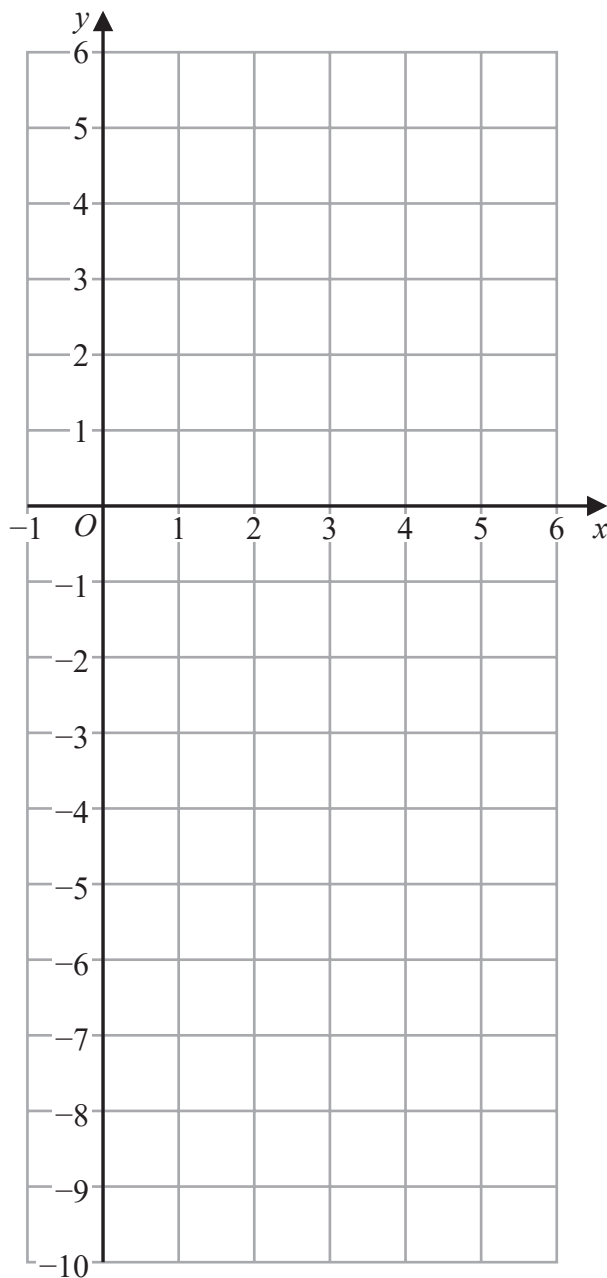
- (b) Work out the probability that this student did **not** win at least one gold star last week.

.....
(1)

(Total for Question 12 is 4 marks)



13 On the grid, draw the graph of $y = -2x + 3$ for values of x from -1 to 5



(Total for Question 13 is 3 marks)

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14 In 2001, the total number of cars produced in the world was 39.8 million.

In 2006, the total number of cars produced in the world was 10.1 million greater than the total number produced in 2001

- (a) Express 10.1 million as a percentage of 39.8 million.
Give your answer correct to one decimal place.

..... %
(2)

In 2011, the total number of cars produced in the world was 59.9 million.

In 2016, the total number of cars produced in the world was 21% greater than the total number produced in 2011

In 2016, the total number of cars produced in the world was N million.

- (b) Work out the value of N .
Give your answer correct to the nearest whole number.

$N =$
(3)

(Total for Question 14 is 5 marks)



- 15 The diagram shows a shape $ABCDEFG$ made from a square $ABDF$ and three identical isosceles triangles BCD , DEF and FGA .

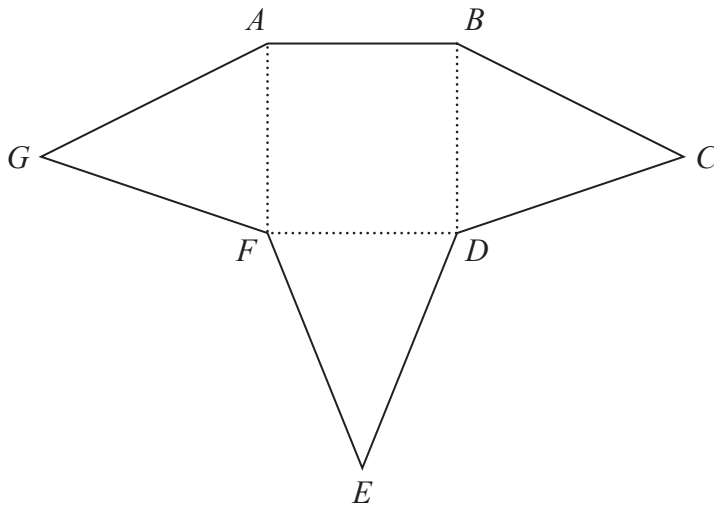


Diagram **NOT** accurately drawn

The perimeter of the square $ABDF$ is 48 cm.
 The perimeter of each isosceles triangle is 30 cm.
 Work out the perimeter of the shape $ABCDEFG$.

..... cm

(Total for Question 15 is 4 marks)

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16 Here are the first five terms of an arithmetic sequence.

1 5 9 13 17

(a) Find an expression, in terms of n , for the n th term of this sequence.

.....
(2)

The n th term of another arithmetic sequence is $3n + 5$

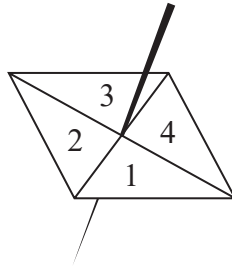
(b) Find an expression, in terms of m , for the $(2m)$ th term of this sequence.

.....
(1)

(Total for Question 16 is 3 marks)



17 Here is a biased 4-sided spinner.



The table gives the probabilities that, when the spinner is spun once, it will land on 1 or it will land on 3

Number	1	2	3	4
Probability	0.26		0.18	

The probability that the spinner will land on 2 is equal to the probability that the spinner will land on 4

Ravina is going to spin the spinner a number of times.

Ravina works out that an estimate for the number of times the spinner will land on 3 is 45

Work out an estimate for the number of times the spinner will land on 4

.....
(Total for Question 17 is 4 marks)

