

Mock Grade 4

Maths

Booklet 2

Paper 2H
Calculator

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Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Solve $8x - 9 = 6(2x - 1)$

$x =$

(Total for Question 1 is 3 marks)

- 2** Alan buys 1.2 kg of sweets.
He pays £2.25 for the sweets.

Alan puts the sweets into bags.

He puts 150g of sweets in each bag.

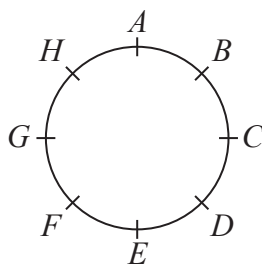
He sells each bag of sweets for 30p.

Work out Alan's percentage profit.

.....%

(Total for Question 2 is 3 marks)

- 3 Hasmeet walks once round a circle with diameter 120 metres.

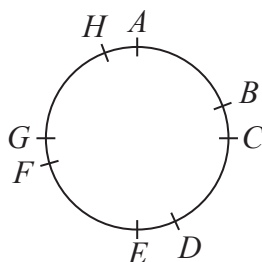


There are 8 points equally spaced on the circumference of the circle.

- (a) Find the distance Hasmeet walks between one point and the next point.

.....m
(2)

Four of the points are moved, as shown in the diagram below.



Hasmeet walks once round the circle again.

- (b) Has the mean distance that Hasmeet walks between one point and the next point changed?
You must give a reason for your answer.

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

(Total for Question 3 is 3 marks)

4 There are only blue cubes, yellow cubes and green cubes in a bag.

There are

three times as many blue cubes as yellow cubes
and five times as many green cubes as blue cubes.

Hannah takes at random a cube from the bag.

Work out the probability that Hannah takes a yellow cube.

(Total for Question 4 is 3 marks)

5 (a) Simplify $(x^4)^2$

.....
(1)

(b) Expand and simplify $7(x + 11) + 4(6 - 3x)$

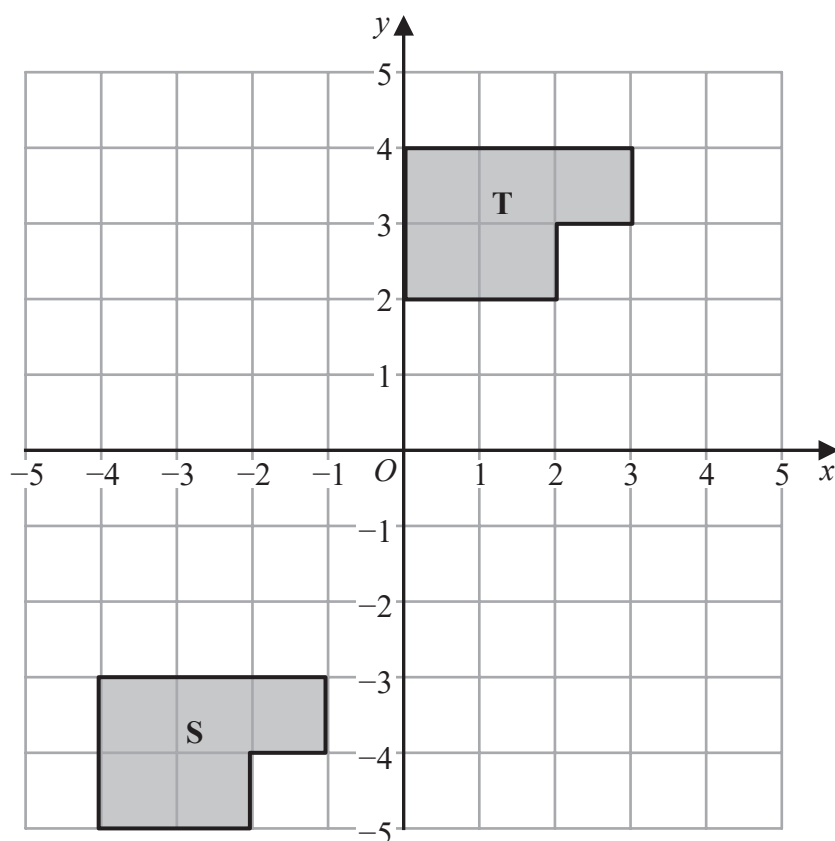
.....
(2)

(c) Factorise fully $5a^2b + 15ab^2$

.....
(2)

(Total for Question 5 is 5 marks)

6



Describe fully the single transformation that maps shape S onto shape T.

.....

.....

.....

(Total for Question 6 is 2 marks)

7 The length of a football pitch is 75 metres, correct to the nearest metre.

Complete the error interval for the length of the football pitch.

..... m \leq length < m

(Total for Question 7 is 2 marks)

- 8 Festival A will be in a rectangular field with an area of $60\,000\text{ m}^2$
The greatest number of people allowed to attend Festival A is 385

Festival B will be in a rectangular field 900 m by 1200 m.

The greatest number of people allowed to attend Festival B is 5850

The area per person allowed for Festival B is greater than the area per person allowed for Festival A.

- (a) How much greater?

Give your answer correct to the nearest whole number.

..... m^2
(4)

Callum says,

“ 200 cm^3 is the same as 2 m^3 because there are 100 cm in 1 m so you divide by 100”

Callum’s method is wrong.

- (b) Explain why.

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

(Total for Question 8 is 5 marks)