CALC C

GCSE Mathematics · Foundation Tier

40 marks · 45 minutes · Calculator

Name ..... **Class** .....

Answer all questions. Show all your working. Calculators may be used. Diagrams are NOT accurately drawn.

1 Write down a multiple of 7 that is between 40 and 50

.....

(Total for Question 1 is 1 mark)

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2 **(a)** Write $\frac{3}{8}$ as a decimal.

.....

(1)

(b) Write 0.045 as a percentage.

..... %

(1)

(Total for Question 2 is 2 marks)

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3 Change 3750 grams to kilograms.

..... kg

(Total for Question 3 is 1 mark)

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4 Here are the times, in seconds, that six students took to run 100 metres.

14.2 **15.8** **13.9** **16.4** **15.1** **14.7**

(a) Work out the mean time. Give your answer correct to 2 decimal places.

..... seconds

(2)

(b) Work out the range of the times.

..... seconds

(1)

(Total for Question 4 is 3 marks)

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5 **(a)** Simplify $4a \times 3b$

.....

(1)

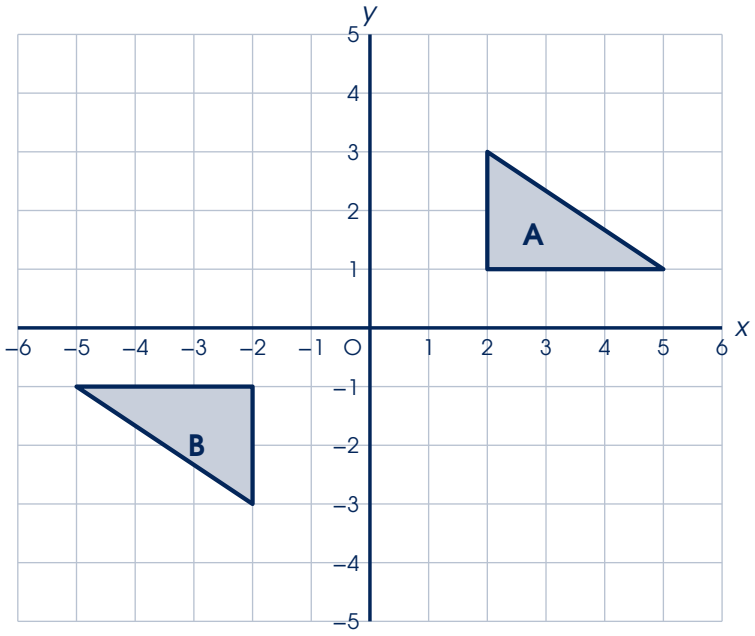
(b) Simplify $n^4 \times n^3$

.....

(1)

(Total for Question 5 is 2 marks)

6



(a) On the grid, reflect shape A in the line $x = 1$

(2)

(b) Describe fully the single transformation that maps shape A onto shape B.

.....

.....

(2)

(Total for Question 6 is 4 marks)

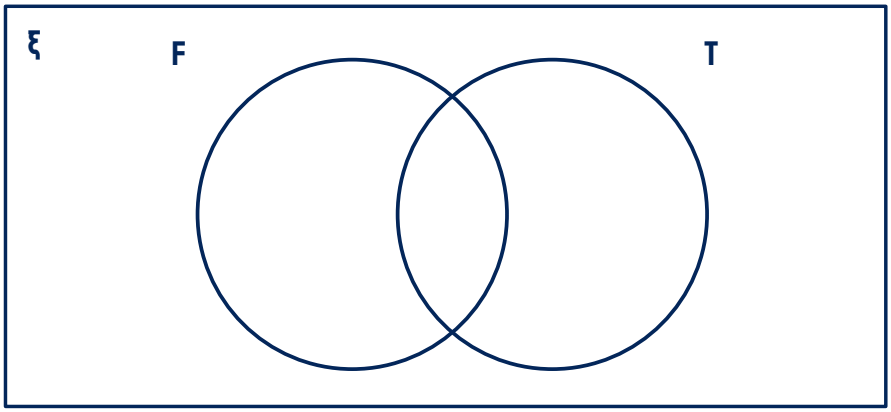
7 Dev invests £2400 in a savings account for 3 years.
The account pays 3.5% simple interest per year.
Work out the total interest Dev gets.

£.....

(Total for Question 7 is 2 marks)

8 There are 50 students in a club.
28 students play football (F). 19 students play tennis (T). 7 students play both.

(a) Complete the Venn diagram.



(2)

One of the students is chosen at random.

(b) Find the probability that this student plays neither football nor tennis.

.....

(1)

(Total for Question 8 is 3 marks)

9 Solve $4(2x - 3) = 3x + 13$

$x =$ .....

(Total for Question 9 is 3 marks)

10 A plumber charges a call-out fee of £45 plus £28.50 for each hour he works.

Mrs Patel's bill was £159

For how many hours did the plumber work?

..... hours

(Total for Question 10 is 3 marks)

11 Grace has a red ribbon 84 cm long and a blue ribbon 126 cm long.

She cuts both ribbons into pieces that are all the same length, with nothing left over.

She wants the pieces to be as long as possible.

How many pieces of ribbon will Grace have altogether?

.....

(Total for Question 11 is 3 marks)

12 Here are some patterns made from sticks.



Pattern 1 Pattern 2 Pattern 3

(a) How many sticks are needed for Pattern 10?

.....

(1)

Tom has 100 sticks.

(b) What is the largest pattern number that Tom can make? You must show your working.

Pattern .....

(2)

(Total for Question 12 is 3 marks)

13 A metal block has a mass of 2.7 kg and a volume of 340 cm^3.

Work out the density of the metal in g/cm^3.

Give your answer correct to 1 decimal place.

..... g/cm^3

(Total for Question 13 is 3 marks)

14 A ladder 6.5 m long leans against a vertical wall on horizontal ground.

The foot of the ladder is 1.8 m from the wall.

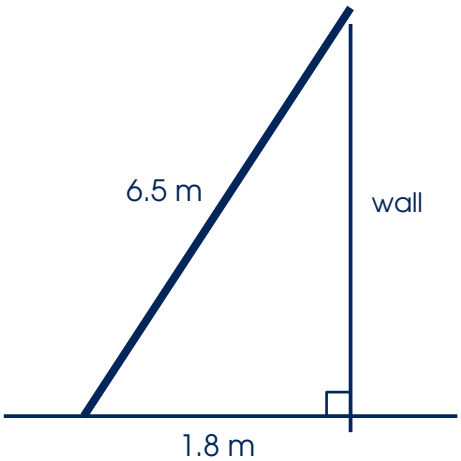


Diagram NOT accurately drawn

The bottom of a window is 6.2 m above the ground.

Will the top of the ladder reach the bottom of the window? You must show your working.

(Total for Question 14 is 3 marks)

15 There are 1260 students at a school. 45% of the students are boys.
The rest of the students are girls.
The ratio of girls who walk to school to girls who do not walk to school is 2 : 5
How many girls walk to school?

.....

(Total for Question 15 is 4 marks)

TOTAL FOR PAPER IS 40 MARKS