



openawards

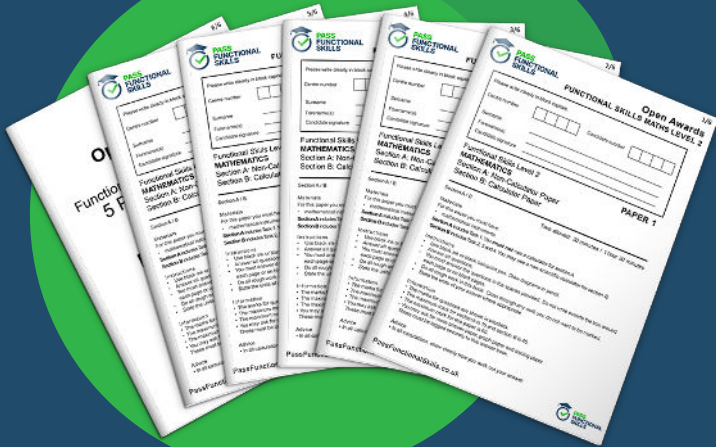
Functional Skills Mathematics Level 1



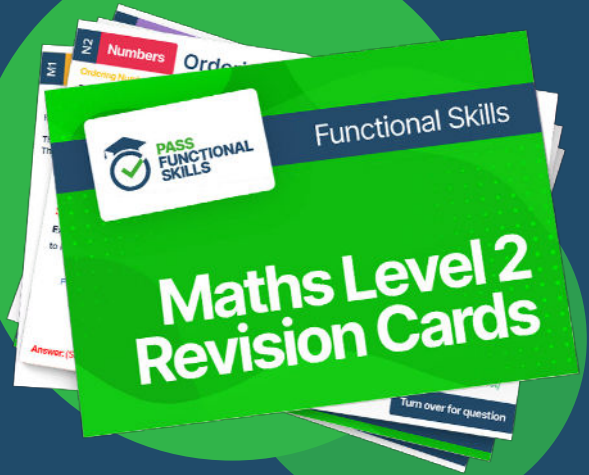
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Mathematics Level 1
Online Practice
Assessment

The Practice Assessment for Level 1 Functional Skills Mathematics can be viewed on the XAMS platform by clicking [here](#).

LEVEL 1 FUNCTIONAL SKILLS QUALIFICATION IN MATHEMATICS



SECTION A - QUESTION AND ANSWER PAPER NON-CALCULATOR – 30 MINUTES PRACTICE ASSESSMENT 1 (FSM107P)

Do not open this paper until you are told to do so by the invigilator.

Overall assessment marks available: **60**

Overall assessment time limit: **2 HOURS**

There are **TWO** Sections to this assessment:

- **Section A** includes Task 1. You **must not** use a calculator for this section.

Total marks available: 15. Time limit: 30 minutes

- **Section B** includes Task 2, 3 and 4. You can use a non-scientific calculator for this section

Total marks available: 45. Time limit: 1 hour and 30 minutes

For Section A you need:

- This question and answer paper
- A pen with black or blue ink
- A pencil
- A ruler and a protractor

INTERNET ACCESS IS NOT PERMITTED AND YOU MUST NOT USE A CALCULATOR

The invigilator will stop the assessment after 30 minutes. You must hand in this question and answer paper at this point.

The invigilator will then hand out **Section B** and a non-scientific calculator. You will then have a further 1 hour and 30 minutes to complete **Section B**.

Instructions

1. Please sign and date below to confirm that your details are correct and that you have understood the instructions.
2. Read each task and question carefully.
3. Remember to show all your workings out clearly.
4. The number of marks available for each question is shown in brackets. Use these marks to guide you on how long to spend on each question.
5. Answer **all** questions using the space provided on this question and answer paper.
6. If you have time, check your work for **Section A** at the end. Once you have handed in this question and answer paper, you will not be able to check this again.
7. If you use extra paper, write your name, learner number and the question number you are answering on it and securely attach it to this question and answer paper.

Learner name:	
Learner number:	
Centre number:	
Signature:	
Today's date:	

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Section A**Question 1**

Which calculation would result in the same answer as 20×0.5 ? (1 mark)

$40 \div 2$

40×2

20×2

$20 \div 2$

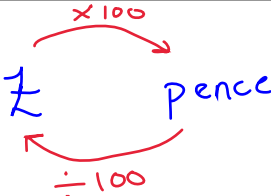
Write your answer in this box:

$20 \div 2$

Question 2

What is 1340 pence written in pounds and pence? (1 mark)

Show your calculations and/or workings out here:


$$1340 \div 100 = \pounds 13.40$$

Write your answer in this box:

$\pounds 13.40$

Question 3

Put the following numbers in order of size:

(1 mark)

322419

332491

232149

322491

Write your answer in this box:

 $232149, 332419, 332491, 322491$ **Question 4**Calculate $256.4 \div 1000$

(1 mark)

Show your calculations and/or workings out here:

$$256.4 \div 1000 = 0.2564$$

Write your answer in this box:

 0.2564

Question 5Which **two** of the following are equivalent to 20%?

(2 marks)

$\frac{2}{5}$	0.02	$\frac{1}{5}$	$\frac{4}{5}$	0.8	0.2
40%	2%	20%	80%	80%	20%

Show your calculations and/or workings out here:

$$\frac{2}{5} \quad 5 \overline{) 2.00} \quad 0.4 \times 100 = 40\%$$

$$0.02 \quad 0.02 \times 100 = 2\%$$

$$\frac{1}{5} \quad 5 \overline{) 1.0} \quad 0.2 \times 100 = 20\%$$

$$\frac{4}{5} \quad 5 \overline{) 4.0} \quad 0.8 \times 100 = 80\%$$

$$0.8 \quad 0.8 \times 100 = 80\%$$

$$0.2 \quad 0.2 \times 100 = 20\%$$

Write your answers in this box:

$$\frac{1}{5} \text{ and } 0.2$$

Question 6

Omar wants to buy a tablecloth and some napkins.

Tablecloth £14.99

Napkins £6.99

He pays with £30.00.

How much change will he receive? Give your answer to the nearest pound.
(2 marks)

Show your calculations and/or workings out here:

$$\begin{array}{r}
 14.99 \\
 + 6.99 \\
 \hline
 21.98 \\
 \\
 \\

 \end{array}
 \qquad
 \begin{array}{r}
 \cancel{30}.\cancel{0}^9\cancel{0}^9 \\
 - 21.98 \\
 \hline
 08.02 \leftarrow \text{£8 to nearest pound}
 \end{array}$$

Write your answer in this box:

£8

Question 7

Omar is making cheesecakes. He has this recipe:

1 Cheesecake (serves 4)

240g digestive biscuits
 100g butter
 600g soft cheese
 100g icing sugar
 284ml double cream

Omar has 750g of digestive biscuits and enough of all the other ingredients. He thinks he has enough digestive biscuits to make 16 servings.

Is Omar correct? Give a reason for your answer. (4 marks)

Show your calculations and/or workings out here:

$4 \text{ servings} = 240 \text{ g biscuits}$
 $16 \text{ servings} = 960 \text{ g biscuits}$

$$\begin{array}{r} \times 240 \\ \hline 960 \end{array}$$

Write your answer and reason in this box:

No - he needs 960g biscuits for 16 servings, and he only has 750g

Question 8

The table below shows the number of visitors to a museum each day in one week.

Mon	Tue	Wed	Thur	Fri	Sat	Sun
32	?	46	48	55	72	61

The mean number of people per day is 50.

How many people visited on Tuesday?

(3 marks)

Show your calculations and/or workings out here:

$$\frac{32 + ? + 46 + 48 + 55 + 72 + 61}{7} = 50$$

$$\frac{314 + ?}{7} = 50$$

$$314 + ? = 50 \times 7$$

$$314 + ? = 350$$

$$? = \underline{\underline{36}}$$

$$\begin{array}{r} 32 \\ 46 \\ 48 \\ 55 \\ 72 \\ 61 \\ \hline 314 \\ 2 \end{array}$$

Write your answer in this box:

36

[End of Section A]

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LEVEL 1 FUNCTIONAL SKILLS QUALIFICATION IN MATHEMATICS



SECTION B - QUESTION AND ANSWER PAPER CALCULATOR – 1 HOUR 30 MINUTES PRACTICE ASSESSMENT 1 (FSM107P)

Do not open this paper until you are told to do so by the invigilator.

Overall assessment marks available: **60**
Overall assessment time limit: **2 HOURS**

There are **TWO** Sections to this assessment:

- **Section A** – please ensure you have handed in Section A before beginning Section B
- **Section B** includes Task 2, 3 and 4. You can use a non-scientific calculator for this section.

Total marks available: 45. Time limit: 1 hour and 30 minutes.

For Section B you need:

- This question and answer paper
- A pen with black or blue ink
- A pencil
- A ruler and a protractor
- A non-scientific calculator

INTERNET ACCESS IS NOT PERMITTED

You now have a further 1 hour and 30 minutes to complete **Section B**.

Instructions

1. Please sign and date below to confirm that your details are correct and that you have understood the instructions.
2. Read each task and question carefully.
3. Remember to show all your workings out clearly.
4. The number of marks available for each question is shown in brackets. Use these marks to guide you on how long to spend on each question.
5. Answer **all** questions using the space provided on this question and answer paper.
6. If you have time, check your work for **Section B** at the end.
7. If you use extra paper, write your name, learner number and the question number you are answering on it, and securely attach it to this question and answer paper.
8. At the end of this section (**Section B**), hand in this question and answer paper and all notes to the invigilator.

Learner name:	
Learner number:	
Centre number:	
Signature:	
Today's date:	

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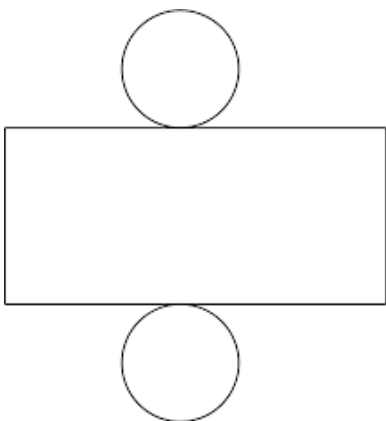
Section B

Question 9

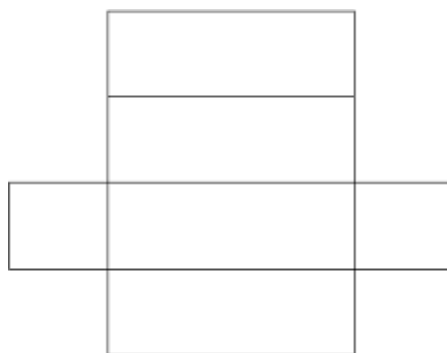
Which of the following nets makes a cylinder?

(1 mark)

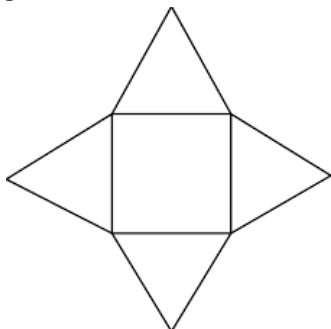
A



B



C



D

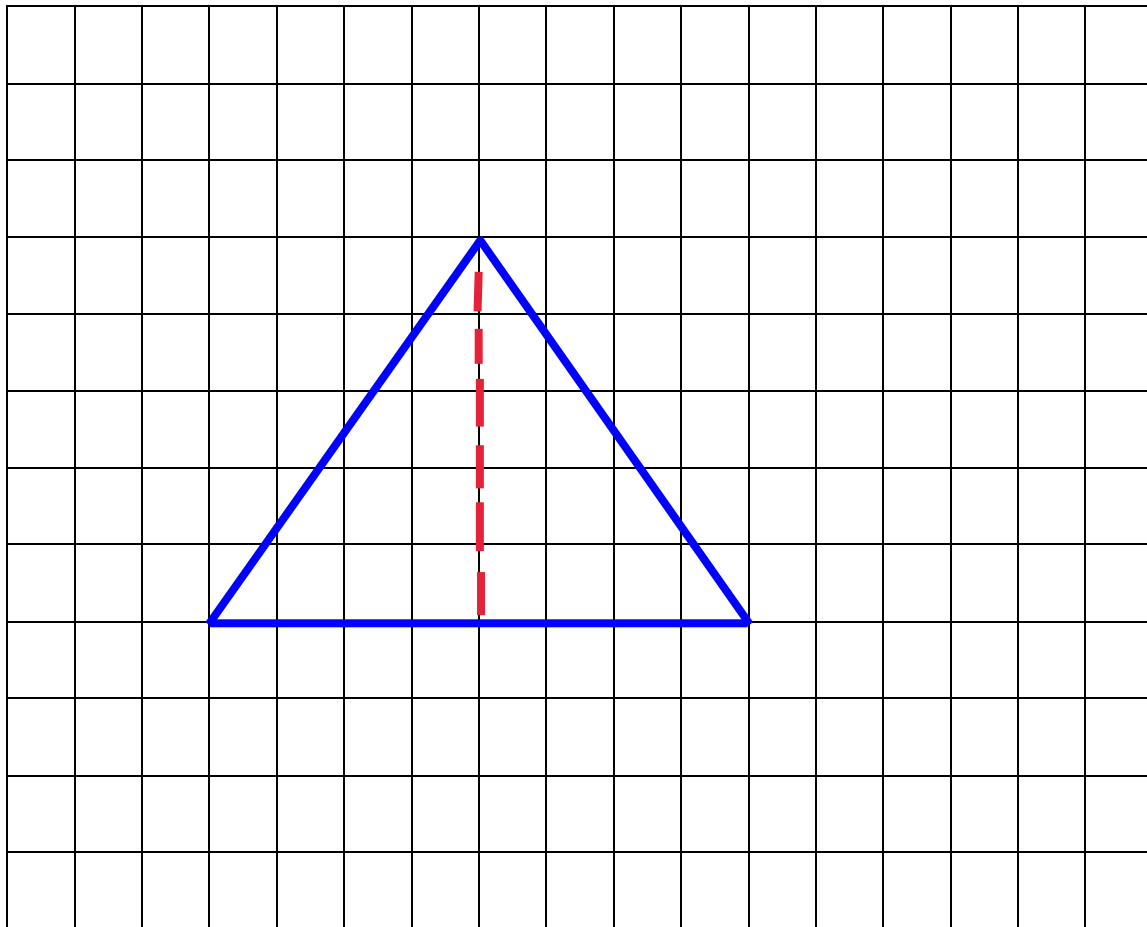


Write your answer in this box:

A

Question 10

Draw a triangle with at least one line of symmetry. Show the line of symmetry on your triangle. (2 marks)



Question 11

Anna works at an animal rescue centre. There were 6160 animals rescued last year.

- $\frac{1}{4}$ of these were cats
- 20% of these were dogs
- The rest were other animals.

How many other animals were rescued last year? (3 marks)

Show your calculations and/or workings out here:

$$\text{Cats: } \frac{1}{4} \text{ of } 6160 = 6160 \div 4 \\ = 1540$$

$$\text{Dogs: } 20\% \text{ of } 6160 = 0.2 \times 6160 \\ = 1232$$

$$\text{Other: } 6160 - 1540 - 1232 = \underline{\underline{3388}}$$

Write your answer in this box:

3388

Question 12

Last year the animal rescue centre rescued 2520 dogs and cats in the ratio of 3:2. $\leftarrow 2+3=5$ parts

This year the number of dogs rescued has increased by 15%.

How many dogs have been rescued this year? (5 marks)

Show your calculations and/or workings out here:

$$5 \text{ parts} = 2520$$

$$1 \text{ part} = 504$$

$$3 \text{ parts} = 1512 \leftarrow \text{so } 1512 \text{ dogs last year}$$

$$2 \text{ parts} = 1008$$

$$1512 \text{ increased by } 15\% \text{ is } 1512 \times 1.15 = 1738.8$$

$$1739 \text{ (nearest whole dog)}$$

Write your answer in this box:

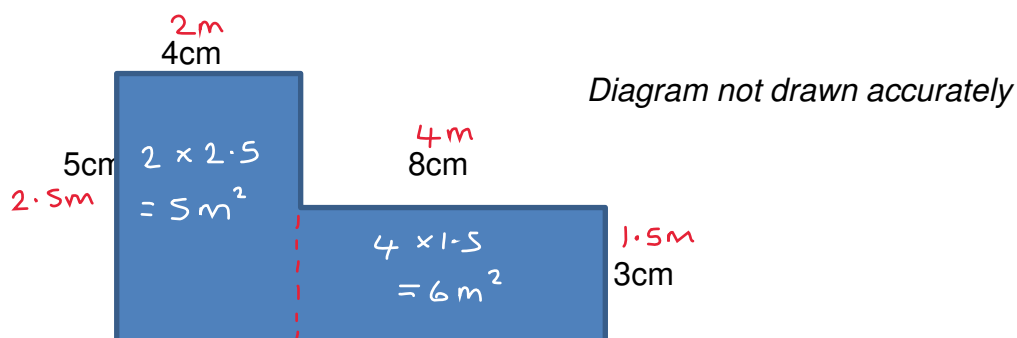
1739

Question 13

Anna needs to put some rabbits in the rabbit run for exercise.

Each rabbit needs 2.5m^2 of space in the rabbit run.

The diagram below shows a plan of the rabbit run.



Scale: 2cm on the plan represents 1m on the rabbit run.

What is the maximum number of rabbits that can be put into the rabbit run?
(4 marks)

Show your calculations and/or workings out here:

$2\text{cm} \xrightarrow{\div 2} 1\text{m}$ find lengths in m: $4 \div 2 = 2\text{m}$
 $5 \div 2 = 2.5\text{m}$
 $8 \div 2 = 4\text{m}$
 $3 \div 2 = 1.5\text{m}$

area of pen = $5 + 6$
 $= 11\text{m}^2$

number of rabbits = $11 \div 2.5$
 $= 4.4$

so can only fit 4 rabbits

Write your answer in this box:

4

Question 14

Put the following fractions in order of size:

(1 mark)

$$\frac{1}{2} \qquad \frac{1}{4} \qquad \frac{3}{4} \qquad \frac{7}{12}$$

$1 \div 2 = 0.5$ $1 \div 4 = 0.25$ $3 \div 4 = 0.75$ $7 \div 12 = 0.583...$

Show your calculations and/or workings out here:

Write your answer in this box:

$\frac{1}{4} \quad \frac{1}{2} \quad \frac{7}{12} \quad \frac{3}{4}$

Question 15

Calculate 23^2

(1 mark)

Show your calculations and/or workings out here:

$$23 \times 23 = 529$$

Write your answer in this box:

$$529$$

Question 16

There are two blue sweets and seven red sweets in a bag.

What is the probability of picking out a blue sweet at random? Express your answer as a fraction.

(1 mark)

Show your calculations and/or workings out here:

$$2 + 7 = 9 \text{ sweets total}$$

$$\text{So } \frac{2}{9} \text{ are blue}$$

Write your answer in this box:

$$\frac{2}{9}$$

Question 17

Leah works as a nurse on a children's ward.

The table below shows the weight of each child on the ward.

Children	Weight
Child A	16.06kg
Child B	16.5kg
Child C	16.51kg <i>heaviest</i>
Child D	16.451kg

Leah calculates the daily amount of medicine to give a child using this formula:

$$\text{Amount of medicine in millilitres} = \text{Weight of child in grams} \div 454 \times 0.75$$

How much medicine will she give to the **heaviest** child on the ward? Give your answer to one decimal place.

(4 marks)

Show your calculations and/or workings out here:

Handwritten work showing the conversion of 16.51 kg to grams and the calculation of the medicine amount:

$$16.51 \times 1000 = 16510 \text{ g}$$

$$\text{medicine} = 16510 \div 454 \times 0.75$$

$$= 27.274... \text{ ml}$$

A diagram shows the conversion between grams (g) and kilograms (kg): $1 \text{ kg} = 1000 \text{ g}$ and $1 \text{ g} = \frac{1}{1000} \text{ kg}$.

Write your answer in this box:

27.3 ml

Question 18

The following table shows the number of visitors to the children's ward each day for one week.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
23	19	26	19	23	15	8

Anna thinks the range of visitors is 18. Is she correct? (2 marks)

Show your calculations and/or workings out here:

$$\begin{aligned} \text{Range} &= 26 - 8 \\ &= 18 \end{aligned}$$

Write your answer in this box:

Yes

Question 19

The table below shows the time in minutes that 30 patients waited to be seen by a doctor.

5	10	32	45	20	24	17	11	39	9
15	28	36	40	22	7	28	39	27	10
4	45	38	27	35	26	13	8	22	11

Create a suitable frequency table below to show the data.

(3 marks)

time (mins)	frequency
0 - 10	7
11 - 20	5
21 - 30	8
31 - 40	7
41 - 50	3

Show your calculations and/or workings out here:

Question 20

Callum is a porter at the hospital. He puts the following 3 items into a box ready to carry them to another room.

Item 1	5.25kg
Item 2	4.02kg
Item 3	3.08kg

The box cannot contain items weighing more than 15kg in total.

Callum wants to add another item weighing 2.68 kg.

Can he put the extra item in the box without it weighing over 15kg?
Give a reason for your answer. (3 marks)

Show your calculations and/or workings out here:

$$\begin{array}{r}
 5.25 \\
 4.02 \\
 + 3.08 \\
 \hline
 2.68 \\
 \hline
 15.03 \leftarrow \text{over 15 kg} \\
 \begin{array}{r}
 1 \\
 2
 \end{array}
 \end{array}$$

Write your answer and reason in this box:

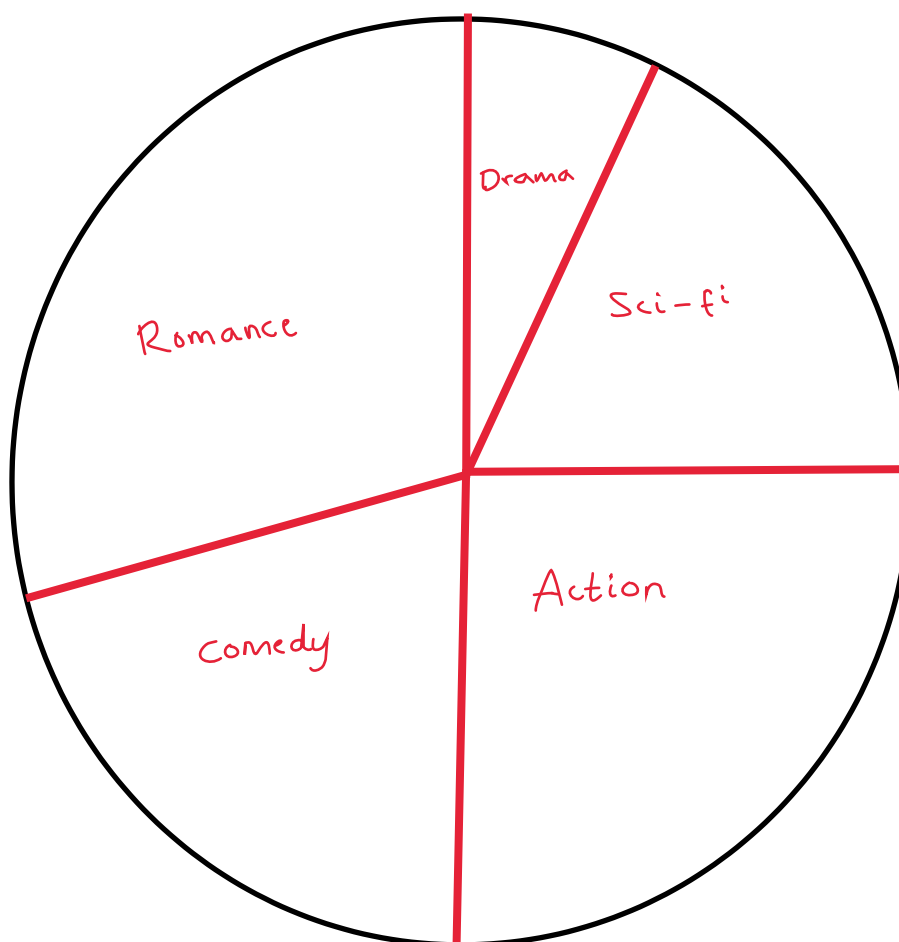
No, total weight is 15.03 kg, so over limit

Question 21

Favourite Types of Film for 100 People					
Type of Film	Sci Fi	Drama	Romance	Comedy	Action
Number of people	20	5	30	20	25

Draw a pie chart to represent this data.

(3 marks)



$$\text{sci-fi: } \frac{20}{100} \times 360 = 72^\circ$$

$$\text{Drama: } \frac{5}{100} \times 360 = 18^\circ$$

$$\text{Romance: } \frac{30}{100} \times 360 = 108^\circ$$

$$\text{Comedy: } \frac{20}{100} \times 360 = 72^\circ$$

$$\text{Action: } \frac{25}{100} \times 360 = 90^\circ$$

Question 22

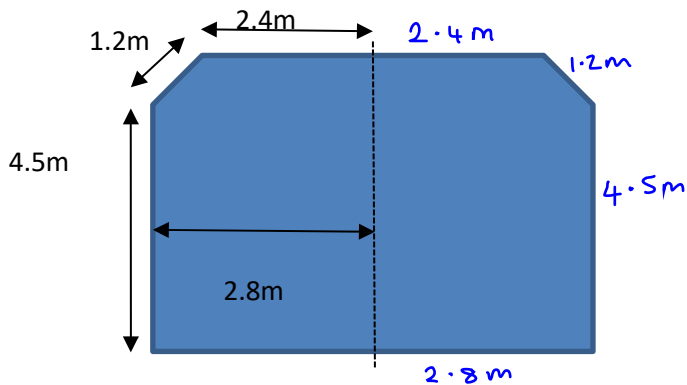
Ali works as a maintenance man. He wants to put fence panels around a children’s play area.

The fence panels are 1.5 metres wide. He will need to leave a gap of at least 200cm for a gate.

2m

The outdoor space has one line of symmetry shown by a dotted line on the diagram below.

Diagram not to scale



How many whole fence panels does Ali need to buy? (4 marks)

Show your calculations and/or workings out here:

perimeter = $4.5 + 1.2 + 2.4 + 2.4 + 1.2 + 4.5 + 2.8 + 2.8$
 $= 21.8m$
 need gap of 2m so need 19.8m of fencing
 each panel 1.5m, so need $19.8 \div 1.5 = 13.2$ panels
 so 13 whole panels

Write your answer in this box:

13

Question 23

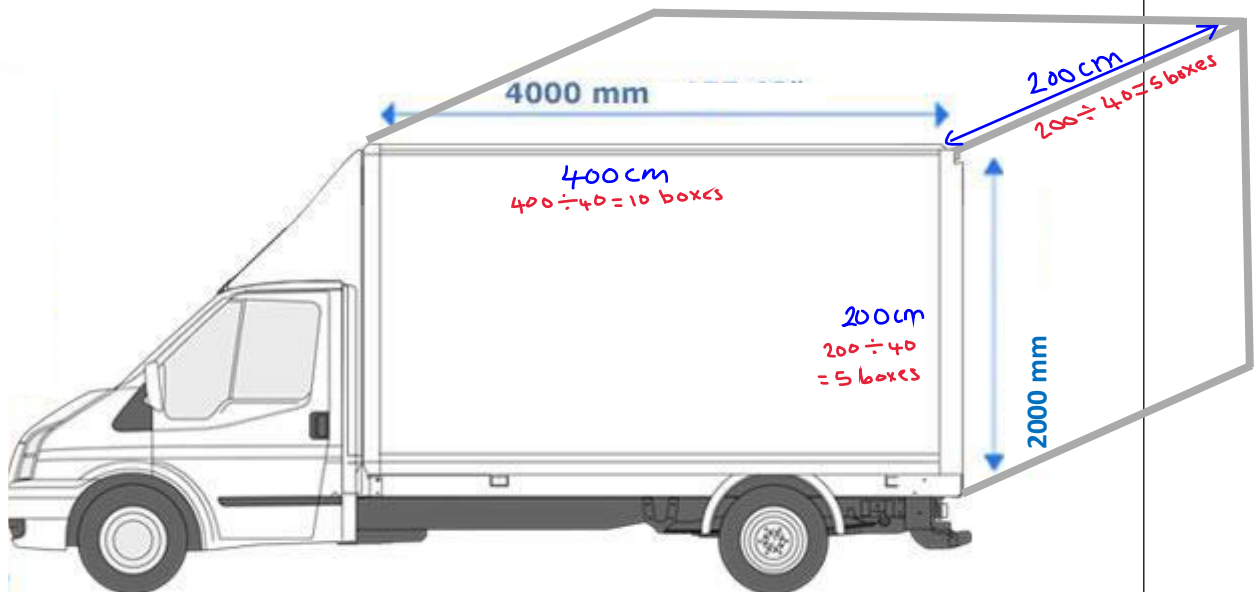
Samantha works for a delivery company. She needs to make a delivery of 255 boxes.

Her van has a width of 200 cm and a height of 2000 mm .

The boxes that she needs to transport are cubes with lengths of 40 cm .

Is Samantha's van large enough to hold the 255 boxes? Give a reason for your answer.

(4 marks)



Show your calculations and/or workings out here:

height: $200 \div 40 = 5$ boxes
width: $400 \div 40 = 10$ boxes
depth: $200 \div 40 = 5$ boxes
so can fit $5 \times 10 \times 5 = \underline{250}$ boxes

Write your answer and reason in this box:

No - can only fit 250 boxes in the van

Question 24

Samantha has a delivery round each day. The time taken for each delivery in Samantha's round is shown below.

Delivery 1	75 minutes
Delivery 2	84 minutes
Delivery 3	23 minutes
Delivery 4	53 minutes

Samantha finds a different route which will reduce the time taken to make all her deliveries by $\frac{2}{5}$

How long will it take Samantha to complete all her deliveries using the new route?

Give your answer in hours and minutes.

(4 marks)

Show your calculations and/or workings out here:

$$\begin{aligned} \text{total time} &= 75 + 84 + 23 + 53 \\ &= 235 \text{ mins} \end{aligned}$$

$$\frac{2}{5} \text{ of } 235 = 94 \text{ mins}$$

$$\begin{aligned} \text{so reduced time is } 235 - 94 &= 141 \text{ mins} \\ &= 2 \text{ hrs } 21 \text{ mins} \end{aligned}$$

$$\begin{aligned} 60 \text{ mins} &= 1 \text{ hour} \\ 120 \text{ mins} &= 2 \text{ hours} \\ 180 \text{ mins} &= 3 \text{ hours} \end{aligned}$$

Write your answer in hours and minutes in this box:

2 hours 21 minutes

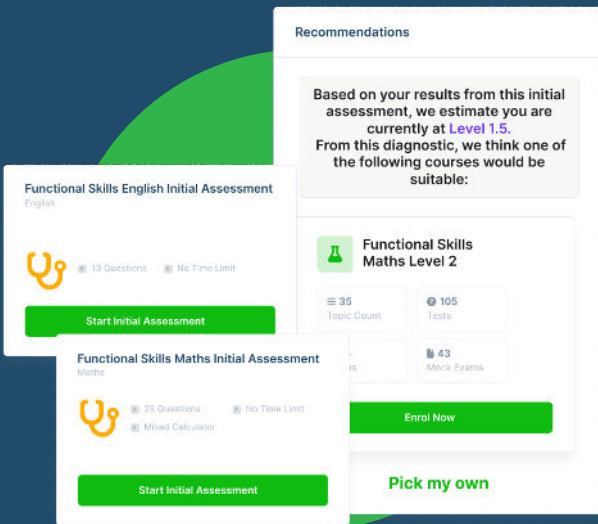
[End of assessment]

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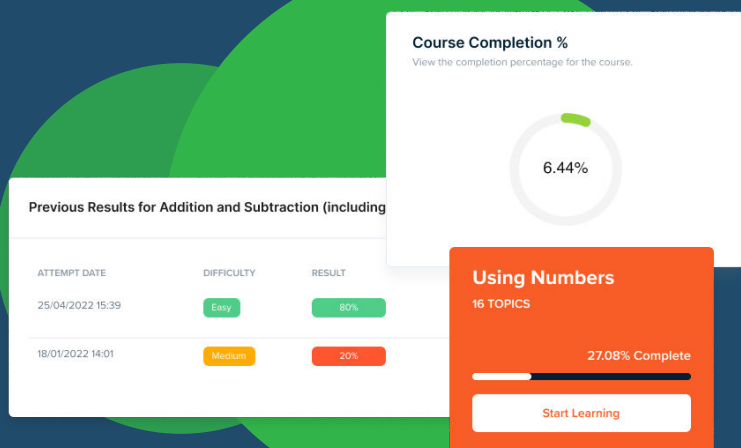
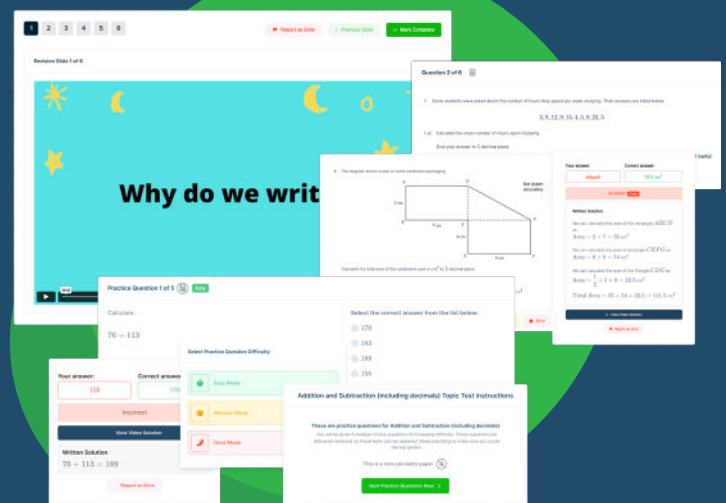


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