



NCFE Level 2 Functional Skills Qualification in Mathematics (603/5060/X)

Paper number: P001372
Section A: Non-calculator Test



Assessment window: Monday 7 September 2020 – Friday 11 September 2020
Time allowed: 30 minutes

Learner instructions

- Answer **all** questions.
- Read each question carefully.
- Write your answers in the spaces provided.
- Show your working, as marks may be awarded for working.
- State units in your answers, where appropriate.
- Check your work.

Learner information

- Section A contains **Activity 1** only.
- The maximum mark for this section is **15**.
- The marks available for **each** question are shown in brackets.

	To be completed by the examiner	Mark
A	Activity 1	/ 15
B	Activity 2	/ 15
	Activity 3	/ 15
	Activity 4	/ 15
	TOTAL MARK	/ 60

Resources

You will need a:

- pen, with black or blue ink
- pencil and eraser
- 30 cm ruler
- protractor.

If extra pages are used, please make sure your name and centre name are on them and they are securely fastened to this booklet.

Please complete the details below clearly and in BLOCK CAPITALS.

Learner name _____

Centre name _____

Learner number

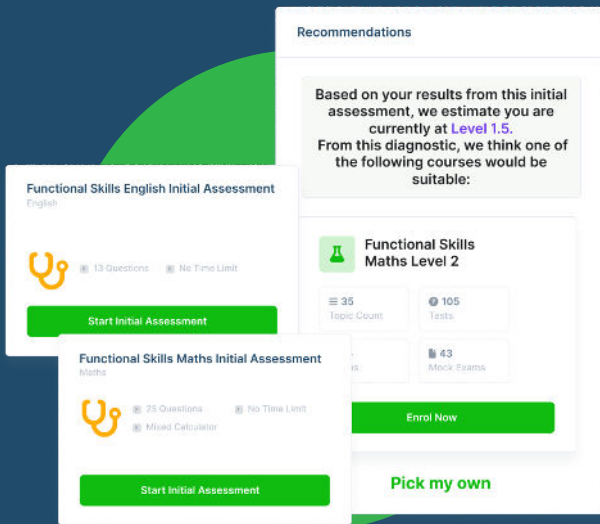
Centre number

Do not turn over until the invigilator tells you to do so.

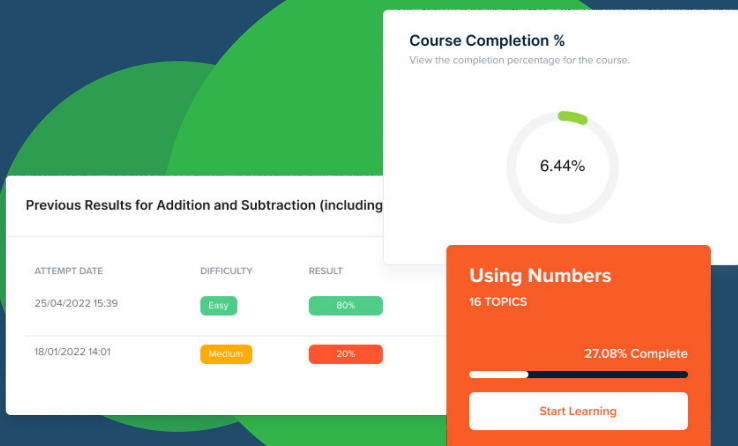
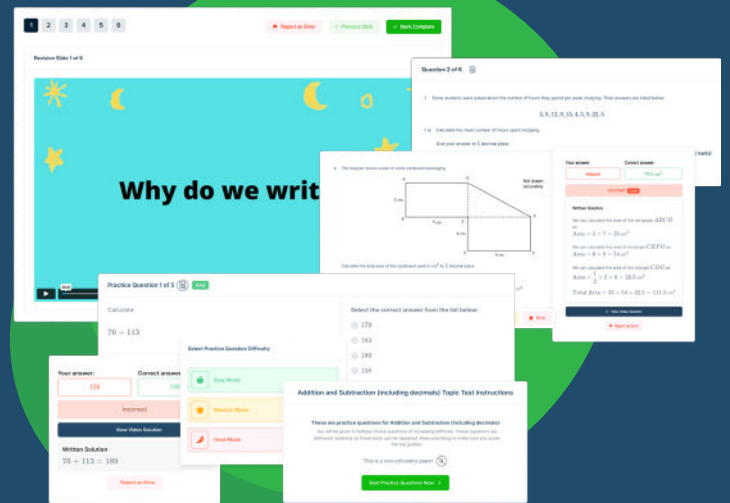


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- ✓ Always know the level you are currently working at
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PAST PAPER

Activity 1: Building blocks

1 (a) Noah's hobby is building models using plastic blocks.

He is making a model of a town.

Noah has opened a new model building set.

Inside is a large bag of coloured blocks:

Colour	Number
White	75
Red	276
Yellow	45
Green	50
Blue	154

What percentage of the blocks are red?

[3 marks]

$$\begin{aligned} \text{Total} &= 75 + 276 + 45 + 50 + 154 \\ &= 600 \end{aligned}$$

$$\begin{aligned} (276 \div 600) \times 100 \\ = 46\% \end{aligned}$$

Your answer:

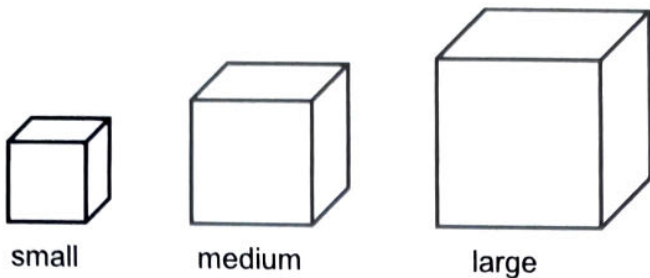
46

%

Please turn over

1 (b) Noah has two bags of blocks.

Each bag contains the same number of small, medium and large blocks.



Noah picks one block from each bag at random.

The table below shows the possible outcomes, which are all equally likely:

		1 st bag		
		Small (S)	Medium (M)	Large (L)
2 nd bag	Small (S)	SS	MS	LS
	Medium (M)	SM	MM	LM
	Large (L)	SL	ML	LL

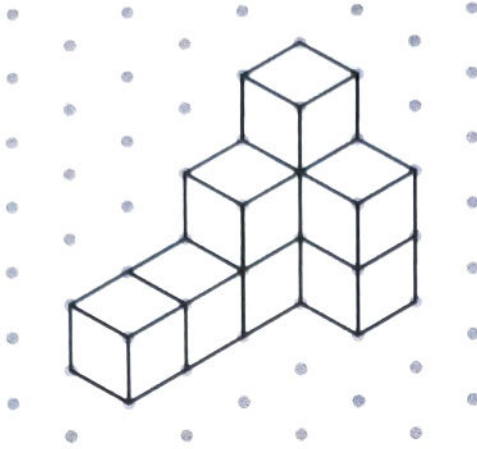
What is the probability that Noah picks two small blocks?

[1 mark]

Your answer: $\frac{1}{9}$

1 (c) Noah has started to build a wall using cubes.

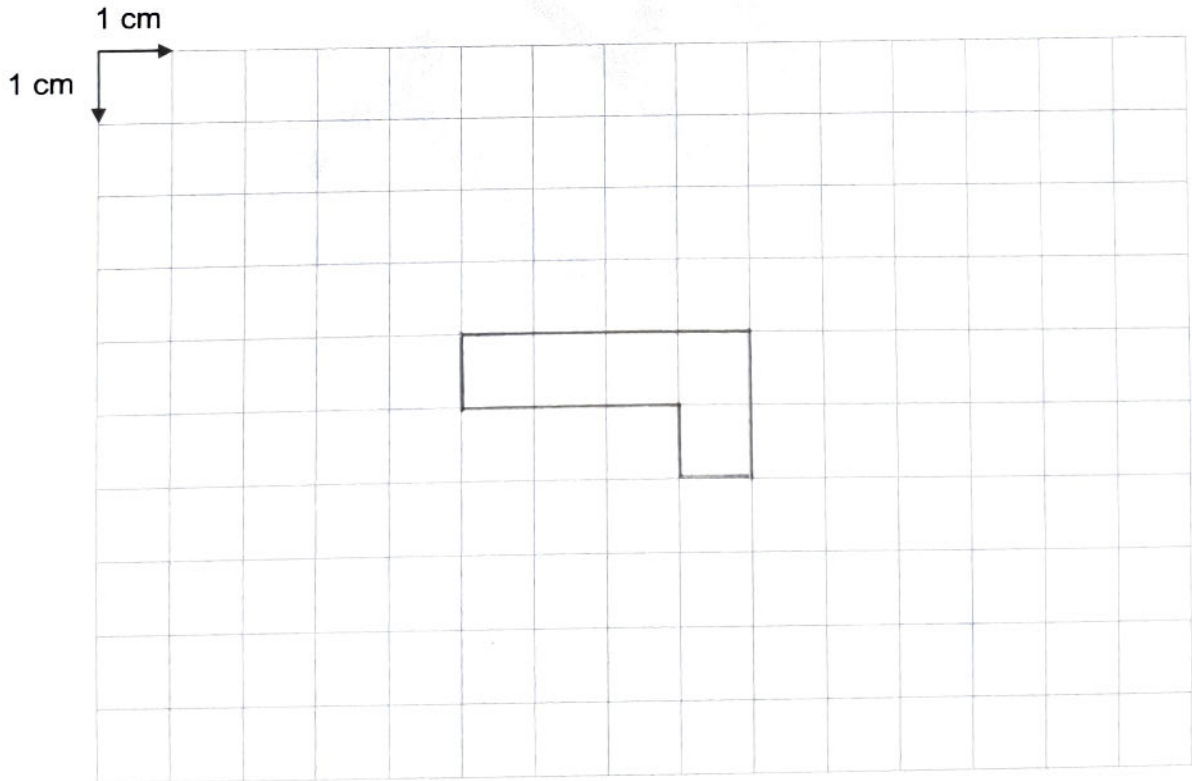
This is the first diagram in the instructions:



The length of each side of the cubes is 1 cm

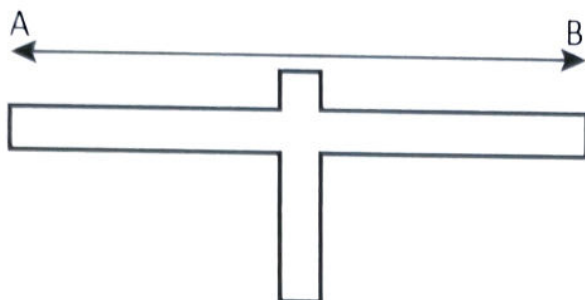
On the grid below, draw the plan view of the wall once Noah has built this part.

[1 mark]



Please turn over

- 1 (d) A statue is 20 m high, and 54 m wide (from A to B).



Not drawn
accurately

Noah is making a scale model of this statue.

Noah's model statue is 5 cm high.

How wide is Noah's model statue?

[2 marks]

$$5 \times (54 \div 20) \\ = 13.5 \text{ cm}$$

Your answer:

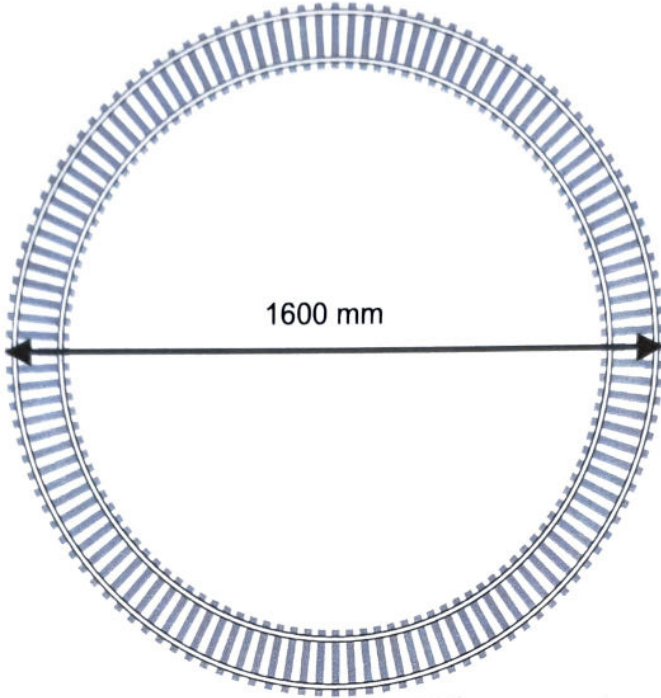
~~13.5~~ 13.5 cm

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Please turn over for the next question.**

Examiner use only

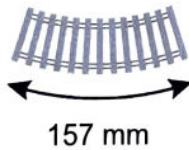
- 1 (e) Noah is making a circular train track.
He has some curved pieces of track.

When he puts them together, the curved pieces will make a circular track with diameter 1600 mm



Not drawn accurately

The outside length of each curved section is 157 mm



How many curved pieces does Noah need to make the whole circle?

Use $\pi = 3.14$

[3 marks]

$$\begin{aligned}\text{circumference} &= \pi d \\ &= \pi (1600) \\ &= 3.14 \times 1600 \\ &= 5024\end{aligned}$$

find number of curved pieces:

$$5024 \div 157 = 32$$

Your answer:

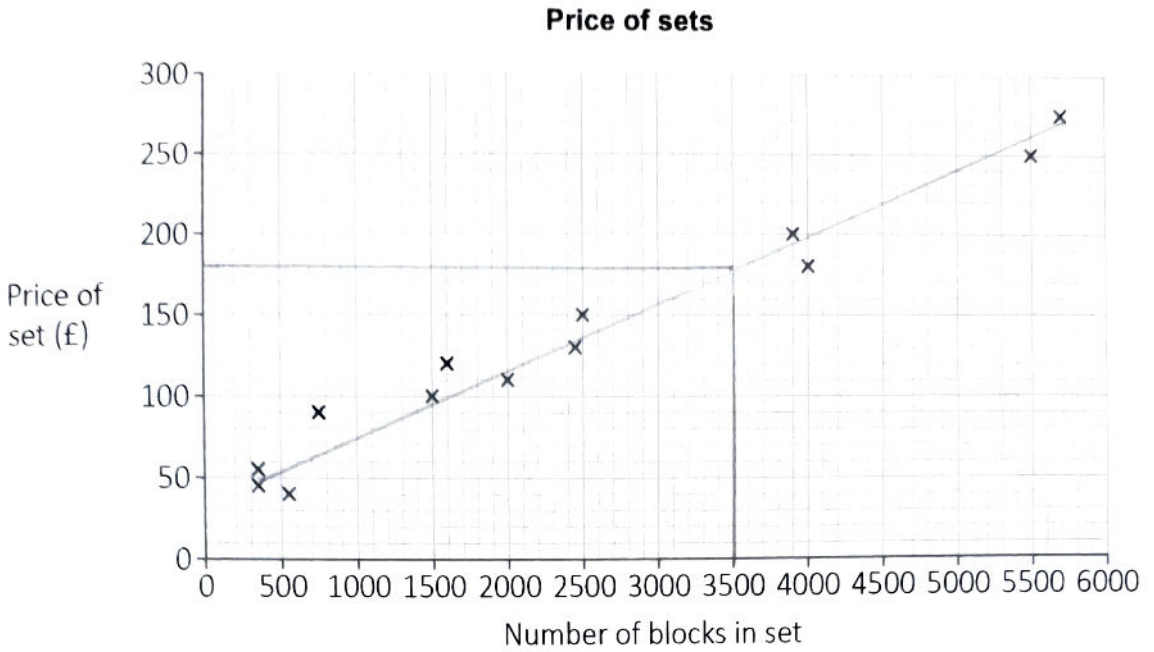
32

curved pieces

Please turn over

1 (f) Model building blocks are sold in sets.

The scatter diagram shows information about more sets that Noah sees for sale:



Use the scatter diagram to estimate the price of a set containing 3500 blocks.

[2 marks]

Your answer:

£ 180

1 (g) Noah sells a bundle of spare blocks online.

The bundle weighs 3120 g

There are six types of block in the bundle:

Block type	Weight of each block (g)
A	2.7
B	4.5
C	7.4
D	2.9
E	3.5
F	9.0

Use the median weight to work out an estimate of the **number** of blocks in the bundle.

[3 marks]

in order :

$$2.7 \quad 2.9 \quad 3.5 \quad 4.5 \quad 7.4 \quad 9.0$$

$$\frac{3.5 + 4.5}{2} = \frac{8}{2} = 4$$

$$3120g \div 4 = 780 \text{ blocks}$$

Your answer:

780

blocks

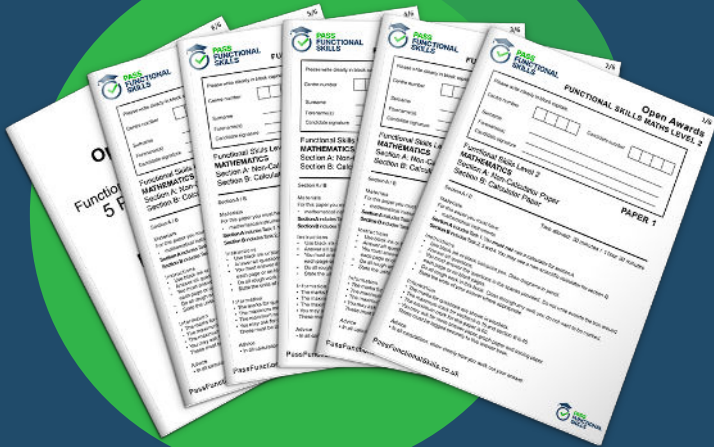
[Total marks: 15]

This is the end of Section A.

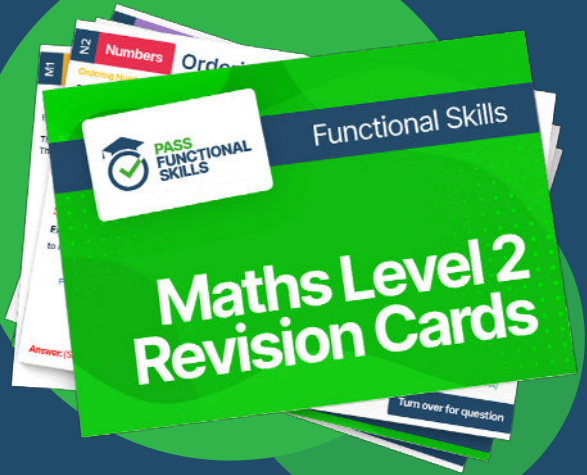
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