



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

Paper number: SAM  
Section A: Non-calculator Test



**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.

### Resources

You will need a:

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

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

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.**

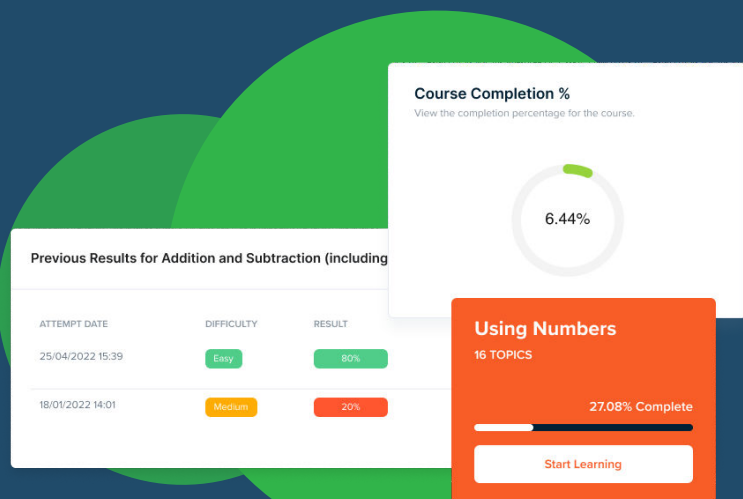
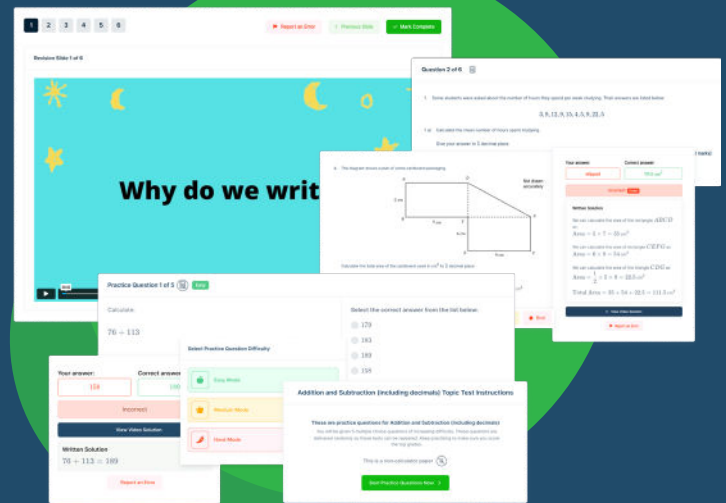


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- ✓ Your answers are analysed to determine your Current Level
- ✓ Suggested courses for you to enrol on based on your calculated level
- ✓ Always know the level you are currently working at
- ✓ Determine when you are ready to sit your exam



- ✓ Explainer videos on every topic
- ✓ Quick-fire style multiple choice questions
- ✓ Test your knowledge with exam-style questions
- ✓ Written solutions for all questions



- ✓ See your progress through as you progress through each topic area
- ✓ Get your average scores for practice questions, topic tests and mock exams
- ✓ View all practice question, topic test and mock exam attempts over time
- ✓ View historical attempts to analyse your progress over time

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**Activity 1: Flat share**

1 (a) Alex, Jas and Stef are students. They are looking for a flat to share.

They see these adverts online:

3 bedroom flats in Upton:	3 bedroom flats in Downton:
£433 per month	£368 per month
£450 per month	£425 per month
£395 per month	£412 per month
£475 per month	£330 per month
£389 per month	£447 per month
£375 per month	

What percentage of the flats in Downton cost over £420 per month?

[1 mark]

$\frac{2}{5} = 40\%$

Your answer: 40 %

1 (b) They want to know which location is the cheapest.

Use the median monthly rental prices to show which location is the cheapest.

Show your working.

[3 marks]

U: 375, 389, 395, 433, 450, 475      $\frac{395+433}{2} = 414$

D: 330, 368, 412, 425, 447     £ 412

Your answer: Downton  
£ 412.

Please turn over

1 (c) Alex, Jas and Stef each get a student loan to help with living expenses.

They decide to allocate two fifths of their loans for food, and one-sixth for travel.

What fraction of their student loan will be left to spend?

[2 marks]

$$\frac{2}{5} + \frac{1}{6} = \frac{12}{30} + \frac{5}{30} = \frac{17}{30}$$

↓

$$\frac{2}{5} \times \frac{6}{6} = \frac{12}{30}, \quad \frac{1}{6} \times \frac{5}{5} = \frac{5}{30}$$
$$1 - \frac{17}{30} = \frac{13}{30}$$

Your answer:

$$\frac{13}{30}$$



1 (d) The students work out that together they have £5400 each year to spend on rent.

They find a flat to rent that will cost £5200 per year.

If the rent **increases by 2%** next year, will it still be within their budget?

**Show your working.**

[2 marks]

$$£5200 \times 1.02 = £5304.$$

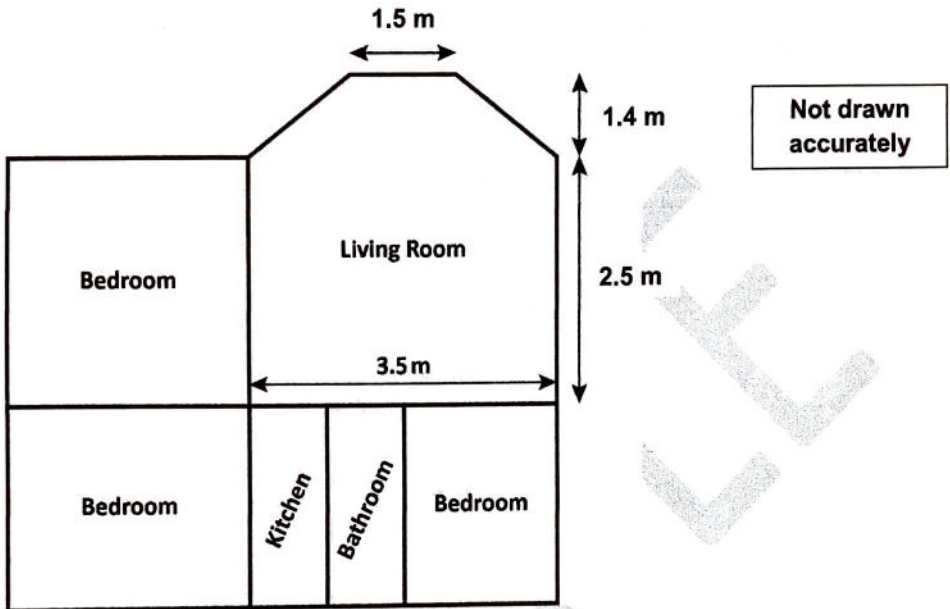
Your answer:

Yes.

Please turn over

1 (e) The plan shows a flat the students like.

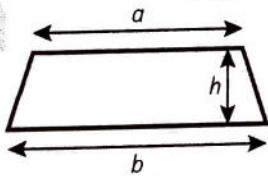
The living room has a trapezium-shaped bay window.



The landlord will replace the carpet in the living room with new flooring, as long as it costs £250 or less.

The new flooring costs £20 per  $\text{m}^2$

The formula for finding the area of a trapezium is:  $\frac{(a+b)}{2} h$



Will the landlord replace the carpet with the new flooring?

Explain your answer.

[4 marks]

$$2.5 \times 3.5 = 8.75 \text{ m}^2 \text{ (rectangle).}$$

$$\frac{1}{2}(1.5 + 3.5) \times 1.4 = 3.5 \text{ m}^2 \text{ (bay window).}$$

$$8.75 + 3.5 = 12.25 \text{ m}^2 \text{ total.}$$

$$12.25 \times \text{£}20 = \underline{\text{£}245}$$

Yes, they will replace the carpet.



- 1 (f) Alex, Jas and Stef decide to rent a different 3 bedroomed flat.

They choose their bedrooms.

- Alex's bedroom has an area of  $12 \text{ m}^2$
- Jas's bedroom has an area of  $18 \text{ m}^2$
- Stef's bedroom has an area of  $20 \text{ m}^2$

They decide to share the rent between them:

**Option 1** – Share the rent **equally** between them

**Option 2** – Share the rent **based on the area** of their bedrooms.

Which option will work out cheapest for Jas?

**Show your working.**

[3 marks]

$$\frac{1}{3} \text{ (Option 1) .}$$

$$\frac{18}{12+18+20} = \frac{18}{50} = 36\% \text{ (Option 2) .}$$

Option 1 is cheapest for Jas.

Your answer:

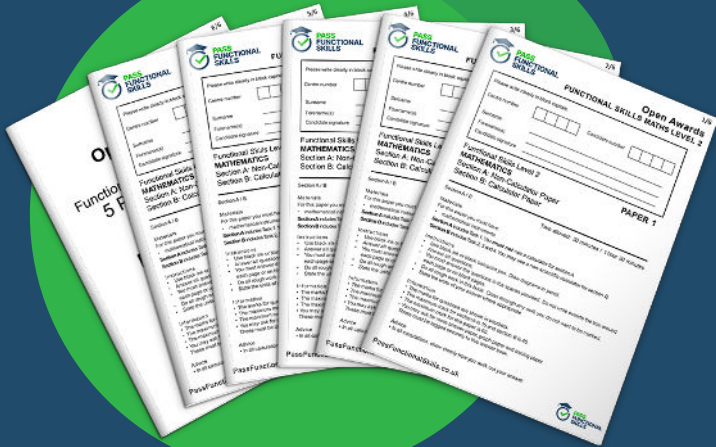
Option 1 .

[Total marks: 15]

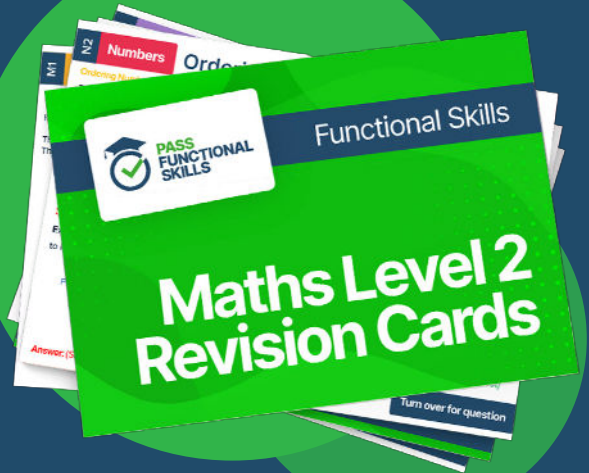
**This is the end of Section A.**



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