ncfe.

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

Paper number:	P001260
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.

This page is intentionally left blank.

Activity 1:   Knitting

1 (a)   Joti works in a knitting shop.
The shop sells knitting charts like the one below.

Knitting is made from rows of stitches.
The symbols in the chart tell knitters what type of stitch to use.

The chart is a coordinate grid.

Row	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	Row
20	•	•				\					0					•	•	20
19	•	•			\				0							•	•	19
18	•	•				\				0						•	•	18
17	•	•					\			0						•	•	17
16	•	•						\			0					•	•	16
15	•	•						\		0						•	•	15
14	•	•							\			0				•	•	14
13	•	•								\	0					•	•	13
12	•	•														•	•	12
11	•	•														•	•	11
10	•	•			0					/						•	•	10
9	•	•				0			/							•	•	9
8	•	•		0				/								•	•	8
7	•	•			0		/									•	•	7
6	•	•	0			/										•	•	6
5	•	•		0	/											•	•	5
4	•	•	0		/											•	•	4
3	•	•		0	/											•	•	3
2	•	•														•	•	2
1	•	•														•	•	1

Stitch

Tick the symbol which is in stitch 5, row 13.

[1 mark]

Your answer:

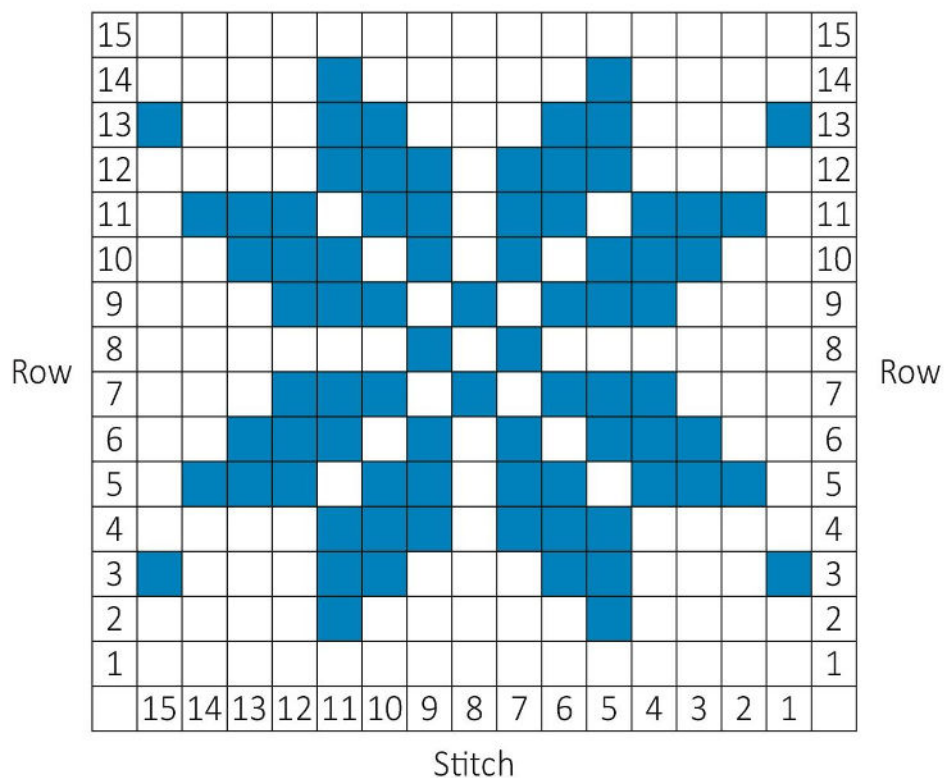| 0	/	\	•
___	___	___	___

Please turn over

3

1 (b) Here is a different knitting chart.

Row

Row

Stitch

This chart tells knitters what colour wool to use for each stitch in the pattern.

Joti changes the chart.
She adds four more blue stiches to give the pattern four lines of symmetry.

Write down the coordinates of the four blue stitches Joti adds.

[2 marks]

Your answer:

Stitch _____ Row _____

Stitch _____ Row _____

Stitch _____ Row _____

Stitch _____ Row _____

1 (c) Gavin goes to Joti's shop.

He is making a circular blanket.

The finished blanket will have a radius of 0.325 m

It will have ribbon all around the edge.

He thinks he will need 2.5 m of ribbon.

Gavin knows that π is about 3.1416

Round π to **1 decimal place** and **use this value** to work out how much ribbon Gavin will have left if he buys 2.5 m

[4 marks]

Your answer: _____ **m**

1 (d)   Sheba also goes to Joti's shop.

She is knitting a rectangular cover for a large storage box.
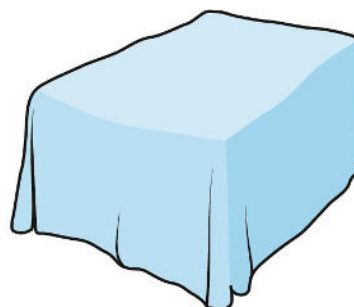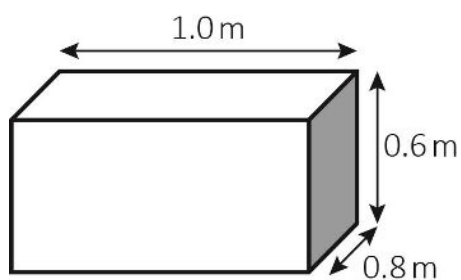
Calculate the length and width of the cover required to cover the box, as shown in the diagram.

[2 marks]

Your answer: _____ **m**

1 (e) Knitting needles are long, thin cylinders with a point at one or both ends.

The size of a knitting needle is the diameter of the cylinder in mm

For example, these needles have a diameter of $2\frac{1}{4}$ mm

Calculate the difference in diameter between $6\frac{1}{2}$ mm needles and $3\frac{3}{4}$ mm needles.

Give your answer as a mixed number.

[1 mark]

Your answer: | **mm**

Please turn over

1 (f) The old world record for the longest knitting needles was 3.98 m

The new world record is 11% longer.

What is the new world record for the longest knitting needles?

Give your answer in m

[2 marks]

Your answer: _____ **m**

1 (g) The relative thickness of wool can be described using improper fractions.

Put these improper fractions in order of size, starting with the smallest.

$$\frac{3}{2} \qquad \frac{7}{4} \qquad \frac{5}{3}$$

[2 marks]

Your answer:

1 (h) Joti and her friends knit squares to make patchwork blankets.

It takes 4 people 20 days to knit enough squares for one blanket.

How long would it take 8 people if they knit at the same rate?

[1 mark]

Your answer: **days**

[Total marks: 15]

This is the end of Section A.

This page is intentionally left blank.