AQA

Please write clearly in block capitals.

Centre number ☐☐☐☐☐ Candidate number ☐☐☐☐

Surname _____

Forename(s) _____

Candidate signature _____
I declare this is my own work.
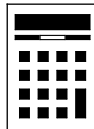
Functional Skills Level 1 MATHEMATICS

Paper 2 Calculator

Tuesday 25 February 2020   Afternoon   Time allowed: 1 hour 30 minutes

Materials
For this paper you must have:
- a calculator
- mathematical instruments.

For Examiner's Use	
Question	Mark
1–8	
9	
10	
11	
12	
TOTAL	

Instructions
- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.
- State the units of your answer where appropriate.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 60.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.

Advice
In all calculations, show clearly how you work out your answer.

8361/2
QAN 603/4257/2

IB/M/Mar20/E6

MAR208361201

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PASS FUNCTIONAL SKILLS

Recommendations

Based on your results from this initial assessment, we estimate you are currently at Level 1.5.
From this diagnostic, we think one of the following courses would be suitable:

Functional Skills Maths Level 2

| ☰ 35 Topic Count | ⏱ 105 Tests |

| 📄 43 Mock Exams |

Enrol Now

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English

🩺 13 Questions • No Time Limit

Start Initial Assessment

Functional Skills Maths Initial Assessment
Maths

🩺 25 Questions • No Time Limit
Mixed Calculator

Start Initial Assessment

✅ 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 mutiple choice questions

✅ Test your knowledge with exam-style questions

✅ Written solutions for all questions

Course Completion %
View the completion percentage for the course.

6.44%

Previous Results for Addition and Subtraction (including...

ATTEMPT DATE	DIFFICULTY	RESULT
25/04/2022 15:39	Easy	80%
18/01/2022 14:01	Medium	20%

Using Numbers
16 TOPICS

27.08% Complete

Start Learning

✅ 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

Or visit
passfunctionalskills.co.uk

Section A

Answer **all** questions in the spaces provided.

1 Which type of angle is the largest?
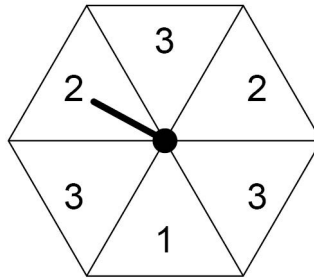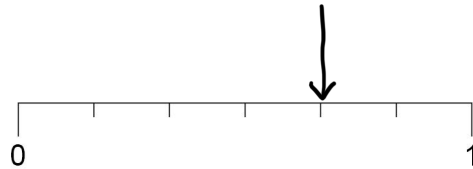Circle your answer.

[1 mark]

obtuse   reflex   acute   right

2 This fair six-sided spinner is spun once.

[handwritten working: 1 1 ← ; 2 2's ; 3 3's ← } odd ; 4/6]

Draw an arrow on the scale to show the probability of landing on an odd number.

[1 mark]

0   1

3 Write in digits   one hundred and twenty four thousand six hundred and fifty
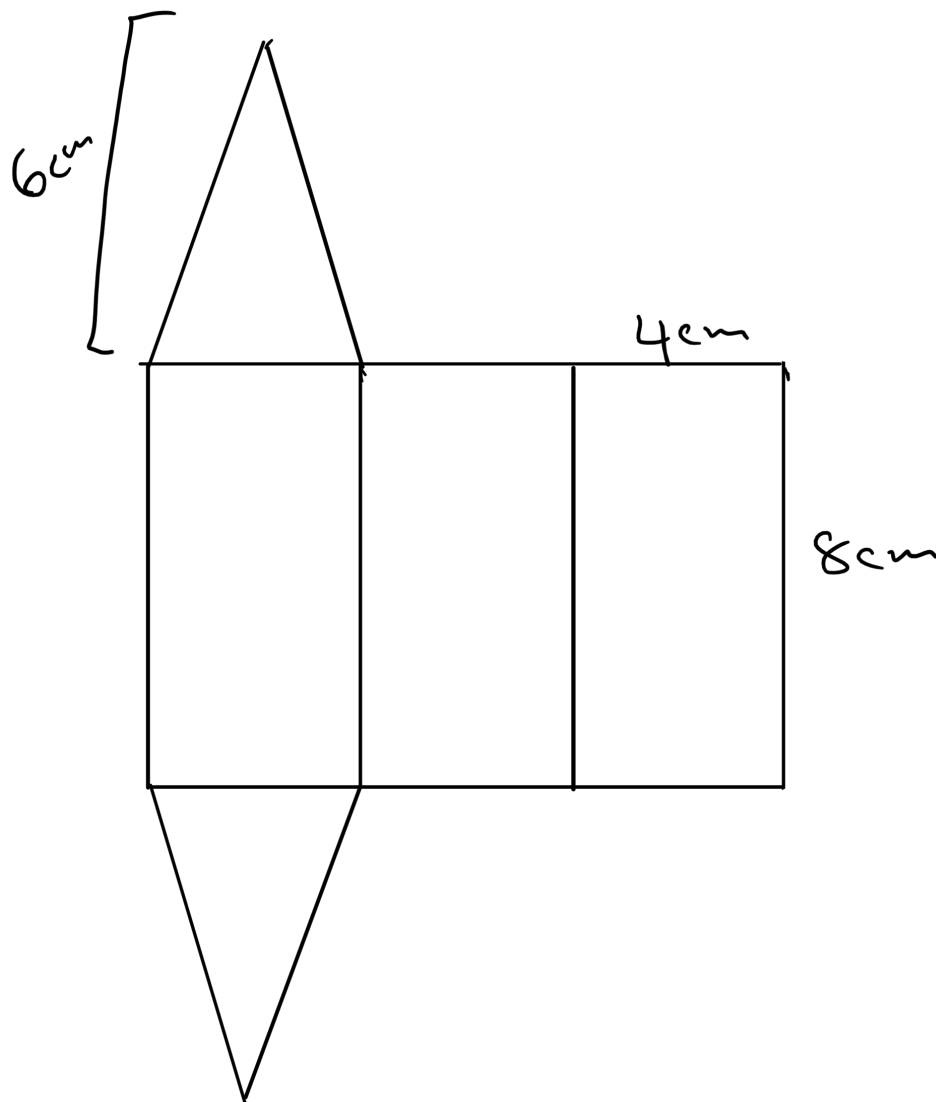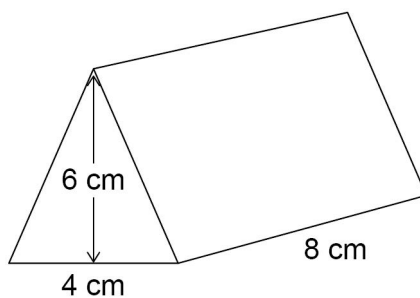
[1 mark]

Answer   124,650

Do not write outside the box

4 A triangular prism has width 4 cm, height 6 cm and length 8 cm

Sketch a net of the prism.
Label the given dimensions on your net.

[2 marks]

6 cm

4 cm

8 cm

6cm

4cm

8cm

Turn over for the next question

Turn over ▶

5   Round   7.8652   to 2 decimal places.

[1 mark]

Answer   _____7.87_____

6   Convert 1200 grams to kilograms.

[2 marks]

_____1200 ÷ 1000_____

Answer   _____1.2_____ kilograms

7   How many days are there in October?

[1 mark]

Answer   31

8   Increase 250 by 30%

[3 marks]

$30\% = 0.3$

$1.3 \times 250 = 325$

Answer   325

12

Turn over for Section B

Turn over ▶

Section B

Answer **all** questions in the spaces provided.

9 **Dance studio**

Megan owns a dance studio.

9 (a) One day, Megan starts teaching her dance classes at 5.30 pm

Megan

- teaches two classes, each lasting 45 minutes
- teaches one class lasting 30 minutes
- has 10-minute breaks between classes
- needs 25 minutes to tidy up and lock up after the last class.

She plans to meet up with friends at a restaurant after her classes.

It takes 12 minutes to walk from the dance studio to the restaurant.

Does she get to the restaurant by 8.30 pm?
You **must** show your working.

[4 marks]

$$45 \times 2 = 90 + 10 = 100$$ ← break

$$100 + 10 + 30 + 25 = 165 \text{ mins}$$

$$165 + 12 = 177 \text{ mins}$$
$$= 2 \text{ hours } 57 \text{ mins}$$

$$5:30 \text{ pm} + 2 \text{ hours } 57 \text{ mins}$$
$$= 8:27 \text{ pm}$$

Yes, 3 mins early

9 (b) Megan is starting a new dance class.

The floor space available for the dancers is a rectangle measuring 13.8 m by 7.1 m

Each dancer needs 4 m^2 of floor space.

Work out the maximum number of dancers that can be in the dance class.

[4 marks]

$$13.8 \times 7.1 = 97.98$$
$$97.98 \div 4 = 24.495$$

Answer _____ 24 _____

Question 9 continues on the next page

9 (c) Megan is shopping for a new speaker for her dance studio.

She sees offers in two shops for the speaker.

G Tone Music Shop Speaker Usual price £129 Special offer $\frac{1}{3}$ off	Oma's Music Store Speaker Usual price £112 Special offer 25% off

Megan wants to pay the lowest price possible.

Which of these shops should she choose?
You **must** show your working.

[5 marks]

$$1 - \frac{1}{3} = \frac{2}{3}$$

$$\frac{2}{3} \times 129 = £86$$

$$25\% = 0.25 \qquad 1 - 0.25 = 0.75$$
$$0.75 \times 112 = £84$$

$$£84 < £86$$

Answer _____Oma's_____

Do not write outside the box

10   **Indoor climbing centre**

10 (a)   At a climbing centre there must be at least 1 member of staff for every 7 climbers.

There are 6 members of staff for one session.

23 climbers have booked for this session.

Work out how many **more** climbers can book for this session.

[3 marks]

$6 \times 7 = 42$

$42 - 23 = 19$

Answer   19

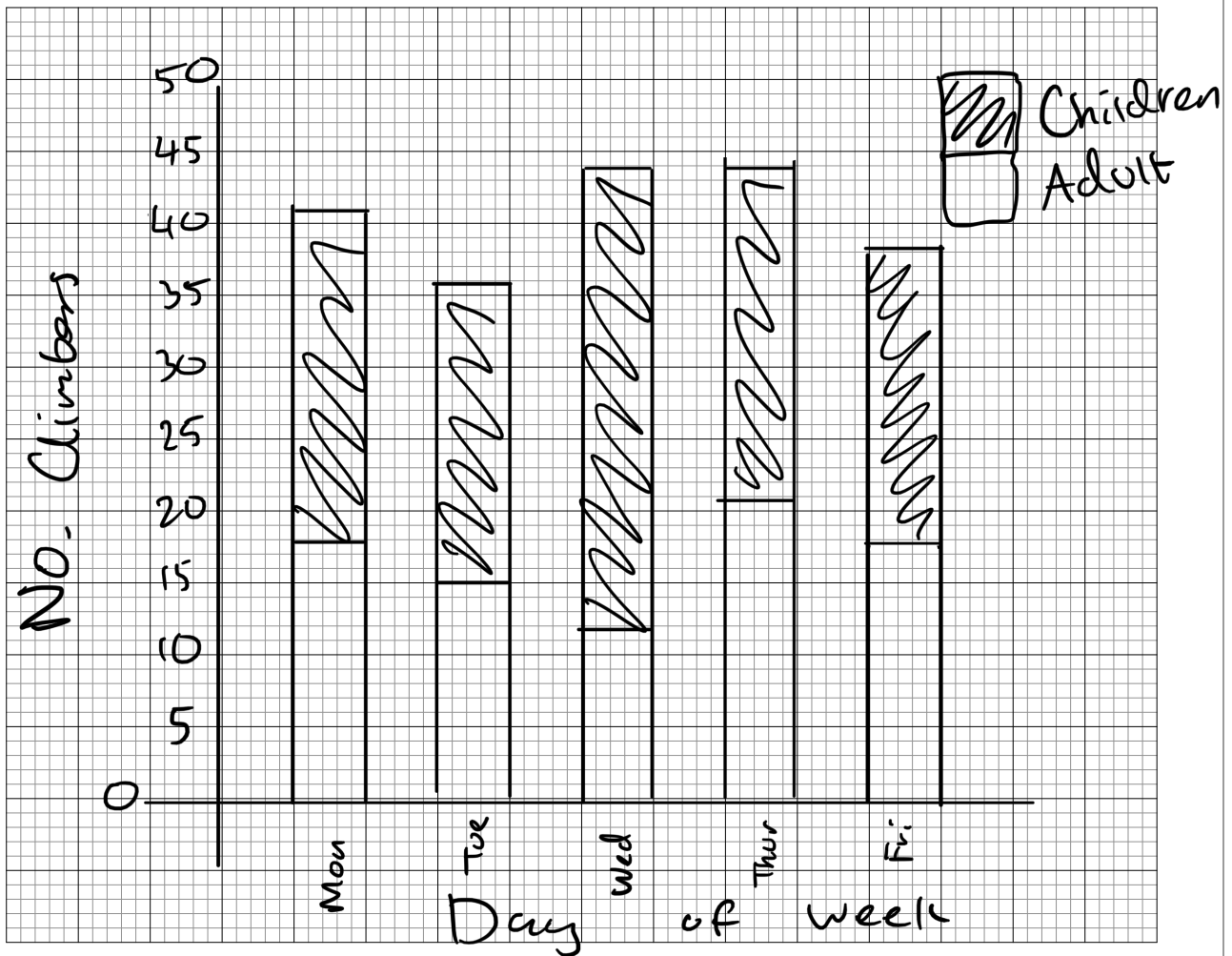**Question 10 continues on the next page**

Turn over ▶

10 (b) The table shows the number of climbers that visited the climbing centre
on Monday to Friday one week.

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Adults	18	15	12	21	18
Children	23	21	22	23	20

Show this information on a suitable diagram.
Use the grid below.

[5 marks]

10 (c) The climbing centre organises a competition for climbers.

Each climber has **six** attempts at climbing a 15-metre wall.

To qualify for the final a climber must have a mean time of **less than** 8 seconds.

Here are Oliver's times, in seconds, for his six attempts.

9.22   8.58   7.79   7.23   8.66   8.14

Does Oliver qualify for the final?
You **must** show your working.

[4 marks]

$$9.22 + 8.58 + 7.79 + 7.23$$
$$+ 8.66 + 8.14 = 49.62$$
$$49.62 \div 6 = 8.27$$

No

12

Turn over for the next question

Turn over ▶

11   **Back to school**

11 (a)   Sandra is shopping for items of school uniform for her children Fred and Beth.

The shopping list below shows the prices of the items Sandra needs to buy.

Fred	Beth
2 school jumpers - £17.50 each	2 packs white shirts - £11.99 per pack
3 grey trousers - £10.75 each	2 skirts - £9.50 each
1 sports polo shirt - £14	1 sports polo shirt - £14.50
1 pack white shirts - £12.95 per pack	1 sports skort - £9
School shoes - £45	1 rugby shirt - £22.95
	School shoes - £38

Fred says,

"The total cost of my uniform is lower than Beth's."

Is Fred correct?
You **must** show your working.

[5 marks]

F: $2 \times 17.5 + 3 \times 10.75 + 14 + 12.95 + 45 = 139.20$

B: $2 \times 11.99 + 2 \times 9.50 + 14.50 + 9 + 22.95 + 38 = 127.43$

Fred's costs more so no.

1 2

11 (b)   Beth earns pocket money by doing jobs at home after school.

Sandra uses this formula to work out how much pocket money Beth receives **each week**.

> Weekly pocket money = £2.50 × number of jobs done + £5

Beth wants to buy a pair of trainers for £70

She saves her pocket money for 3 weeks.

She did

- 5 jobs in the first week
- 9 jobs in the second week
- 10 jobs in the third week.

Is this enough to buy the trainers?

You **must** show your working.

[4 marks]

1st: 2.50 × 5 + 5 = 17.50

2nd: 2.50 × 9 + 5 = 27.50

3rd: 2.50 × 10 + 5 = 30

17.50 + 27.50 + 30

= 75

Yes, she has £5 left

9

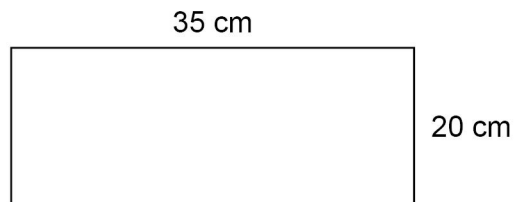**Turn over ▶**

12 **Handbags**

Jon makes handbags to sell online.

Jon wants to make 50 handbags.

12 (a) For each handbag Jon needs a rectangle of leather measuring 35 cm by 20 cm

35 cm

20 cm

He cuts the rectangles from sheets of leather measuring 120 cm by 100 cm

The grid on the opposite page is a scale drawing of a sheet of leather.

Jon says,
"I need 4 sheets of leather to make 50 handbags."

Is he correct?
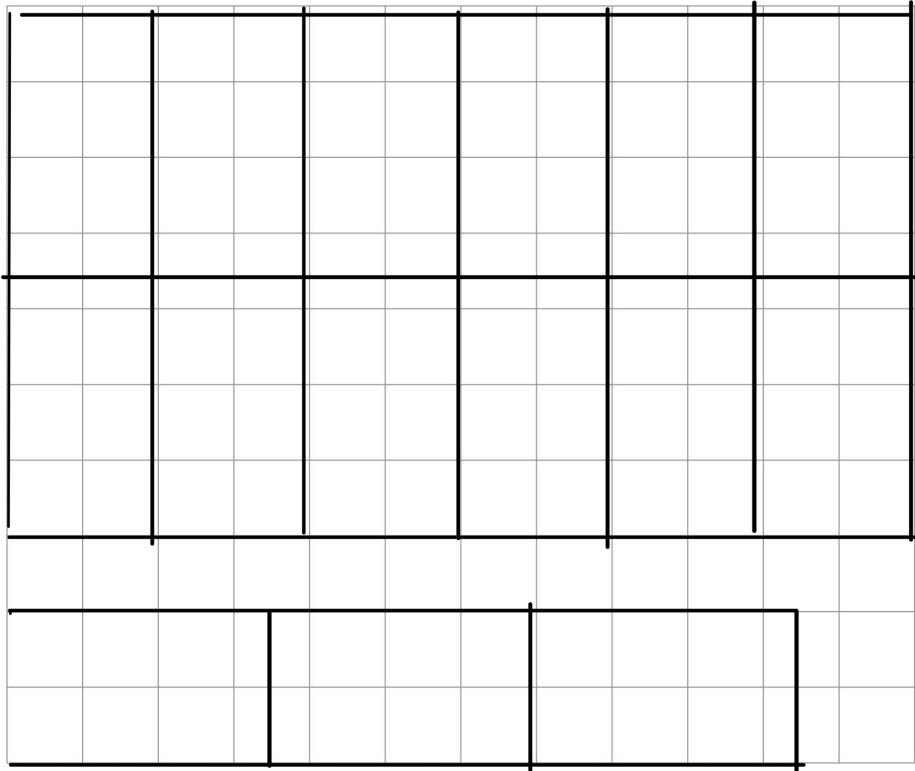You may use the grid to help you.
You **must** show your working.

[5 marks]

Scale: 1 cm represents 10 cm

$35 \times 20 \rightarrow$

3.5×2

15 max from one sheet

$15 \times 4 = 60$

$15 \times 3 = 45$

Yes he is correct

Question 12 continues on the next page

Turn over ▶

12 (b) Jon fixes a chain to each handbag to make the handle.

Each chain handle is 75 cm long.

He needs enough chain for the 50 handbags.

Jon has 5 rolls of chain.

Each roll of chain is 6 metres long.

How many **more** 6-metre rolls of chain does he need?

You **must** show your working.

[5 marks]

6m = 600cm

600 ÷ 75 = 8 Chains per roll

50 ÷ 8 = 6.25 rolls needed

Needs 7 rolls

7 − 5 = 2

Answer _____2_____

12 (c)   The table shows the costs for making the 50 handbags.

	Cost for 50 handbags
Leather	£252.50
Chain	£33.50
Fasteners	£119.50
Other costs	£87.00

Jon expects to sell all 50 bags.

He wants to make at least £3.50 profit on each bag.

Work out the **minimum** price he should sell each bag for.

[4 marks]

252.50 + 33.50 + 119.50
+ 87 = 492.50

492.50 ÷ 50 = 9.85

9.85 + 3.50 = 13.35

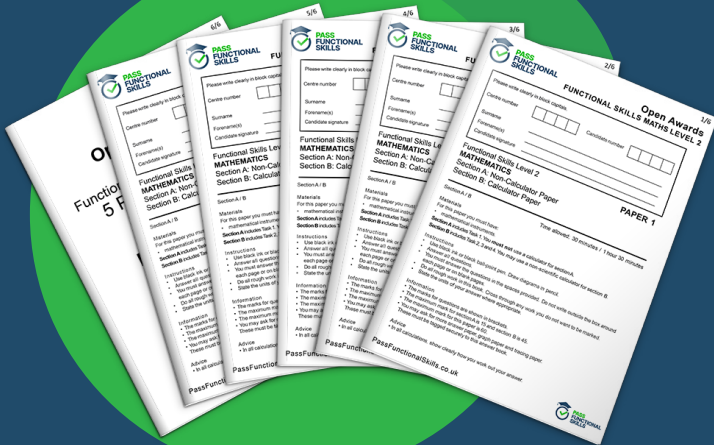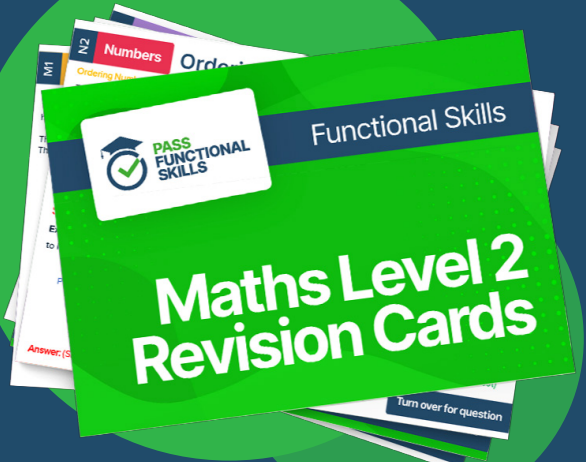Answer £ _____13·35_____

14

END OF QUESTIONS

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