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NCFE Level 1 Functional Skills Qualification in Mathematics (603/5055/6)

Paper number:	Practice P001268
Section B:	Calculator Test

Time allowed: 1 hour 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 B contains **Activities 2, 3** and **4**.
- The maximum mark for this section is **45**.
- 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
- calculator.

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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Activity 2: Dinosaur cake

2 (a) Reg wants to make a cake shaped like a dinosaur for his son's birthday party.

He looks online and finds this dinosaur-shaped cake tin for sale.

Reg thinks,

"I like this tin but I don't know how much cake mixture to make.
My recipe is for a 20 centimetre (cm) square tin that is 8 cm deep."

What is the volume, in cm³, of a 20 cm square tin that is 8 cm deep?

[2 marks]

Your answer: **cm³**

Please turn over

2 (b) This is Reg's cake recipe.

Basic Cake Recipe for 20 × 20 × 8 cm square tin

220 grams butter or soft margarine
220 grams caster sugar
4 eggs, lightly beaten
220 grams self-raising flour, sifted

The dinosaur cake tin that Reg wants to use has a capacity of 2.4 litres.

1 millilitre (ml) = 1 cm^3

If Reg uses the dinosaur tin, how many grams (g) of butter will he need?

[4 marks]

Your answer: **g**

2 (c)　Reg already has two round cake tins.

He thinks he could use one of those and put a picture of a dinosaur on the top.

- Tin A will need $\frac{3}{5}$ of the cake mix recipe.

- Tin B will need $\frac{2}{3}$ of the cake mix recipe.

Which tin will need the smaller amount of cake mix?
Show your working.

[2 marks]

Your answer:

2 (d)　If Reg uses both round tins, he will need approximately $\frac{5}{4}$ of the cake mix recipe.

Reg says, "That is the same as increasing the recipe amounts by 25%".

Is Reg correct? Show how you decide.

[2 marks]

Your answer:

Please turn over

2 (e)   Reg finally decides he will make dinosaur cupcakes for his son's party.

He finds two different ways to decorate them.

Cupcake toppers
Packs of 7
£1.20 per pack

Cupcake wrappers
Packs of 4
90p per pack

Reg will make 24 cupcakes.

Will it be cheaper for Reg to buy 24 toppers or 24 wrappers?
Show your working.

[3 marks]

Your answer:

2 (f) Reg buys 24 wrappers. 6 of the wrappers are blue.

At the party, Reg's son is first to choose a cupcake. He picks one at random.

What is the probability that he will pick a cupcake in a blue wrapper?
Give your answer as a decimal.

[2 marks]

Your answer:

[Total marks: 15]

Activity 3:   Student finance

3 (a)   Joe is studying Business Management at college.

At the start of the course, he took out a loan to cover his course fees.

When Joe finishes his course and gets a job, he will pay back the loan.

Each year he will have to pay back:

- 0% of any income he earns up to £25 000 a year
- 15% of any income he earns over £25 000 a year.

The repayments will be spread evenly over the year.

Work out Joe's **monthly** loan repayment if he earns £27 120 a year.

[4 marks]

Your answer: £

3 (b)   Joe has borrowed £1125

While Joe is at college, simple interest is added to this amount at a rate of 5% per year.

Calculate the total amount Joe will owe after **two** years at college.

[3 marks]

Your answer: £

3 (c) Joe buys food and drink at the college café.

He keeps a record of how much money he spends at the café each day for 20 days.

The results are shown in this table:

£3.05	£2.23	£0.19	£1.05	£4.17
£3.50	£1.08	£0.90	£0.44	£1.32
£2.95	£1.50	£2.00	£3.64	£0.00
£2.55	£1.65	£1.75	£0.00	£2.05

Use the data to complete the bar chart.

[3 marks]

Amount of money Joe spends in the college café

Number of days (vertical axis, scale 0 to 7)

Money spent (£) (horizontal axis)

Categories: £0 to £0.99, £1 to £1.99, £2 to £2.99, £3 to £3.99, £4 to £4.99

Bars shown: £0 to £0.99 = 5, £1 to £1.99 = 6
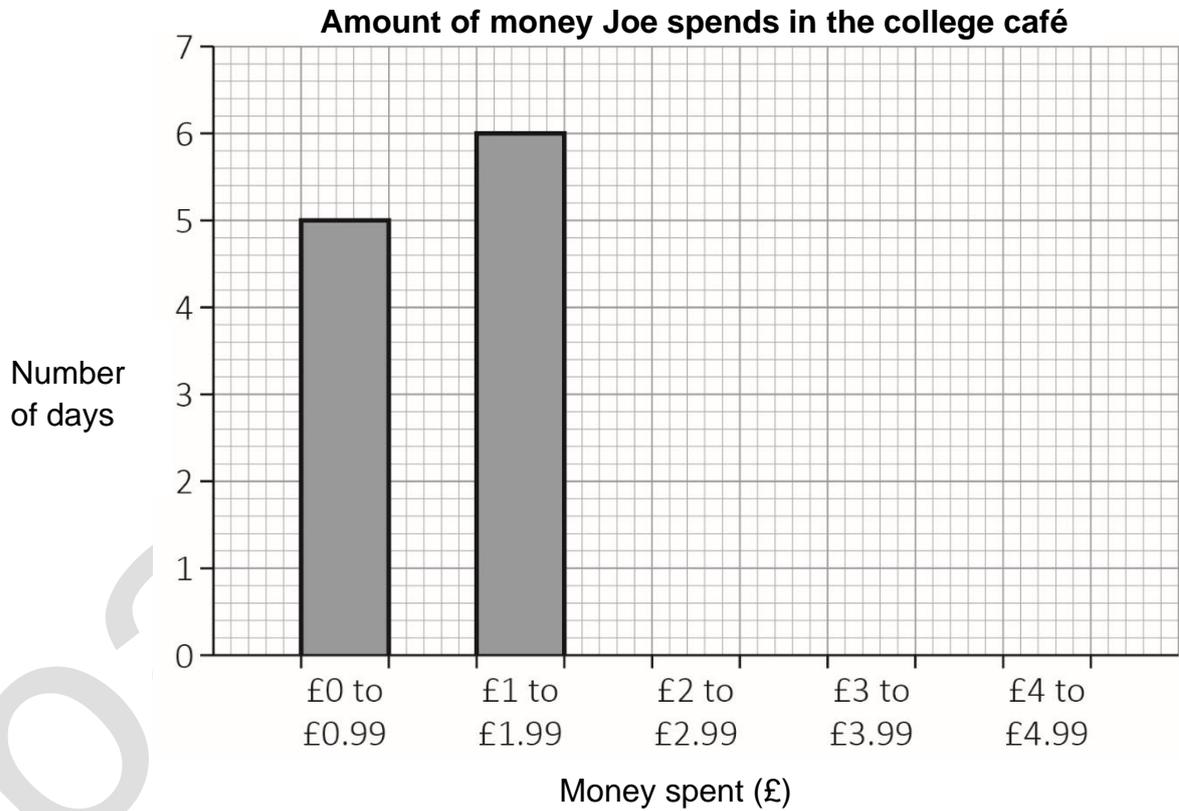
3 (d)   Joe has a loyalty card for the college café.

When he has paid for nine hot drinks, he gets the tenth one free.

Joe notices that the card is symmetrical.

Draw all the lines of symmetry on the loyalty card.

[2 marks]
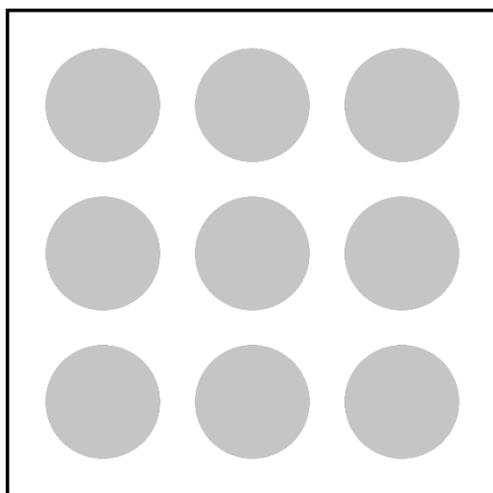
3 (e) When Joe gets a free drink, he puts some money in **one** of the four charity boxes by the till.

The table shows the probability that he puts money in each box.

Charity	Probability
Save the Wado	0.25
Think Pink	0.3
Open Line	0.4
The Abbey Trust	0.05

Which charity is Joe most likely to donate money to?
Give a reason for your answer.

[1 mark]

Your answer:

3 (f) The table shows the amount of money in each of the charity boxes when the café manager counts all the donations.

The table is incomplete.

The range of the amounts is £3.59
The total is £35.36

The Save the Wado charity box has the most money in it.
Open Line charity box has the least.

Complete the table by filling in the values for Open Line and The Abbey Trust.

[2 marks]

Your answer:

Charity	Money
Save the Wado	£10.50
Think Pink	£8.72
Open Line	
The Abbey Trust	

[Total marks: 15]

Please turn over

## Activity 4:   Student services

4 (a)   Joy works in student services at a college.
She is responsible for publicity.

Joy produces a leaflet explaining what services are available.

The leaflet is made by folding a piece of A4 card to make 6 pages.
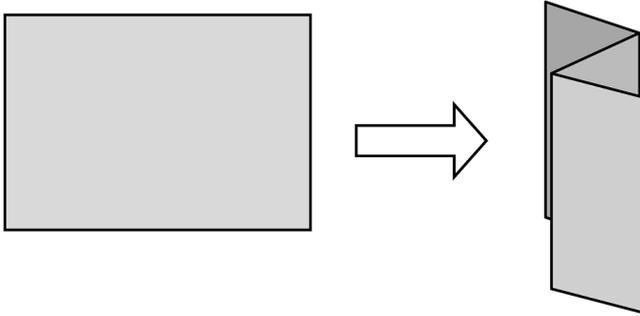
A4 card measures 29.7 cm by 21.0 cm

What are the dimensions of **one** of the pages of the leaflet?

[2 marks]

Your answer:

4 (b) What is the **total** area, in cm², of the 6 pages?

[3 marks]
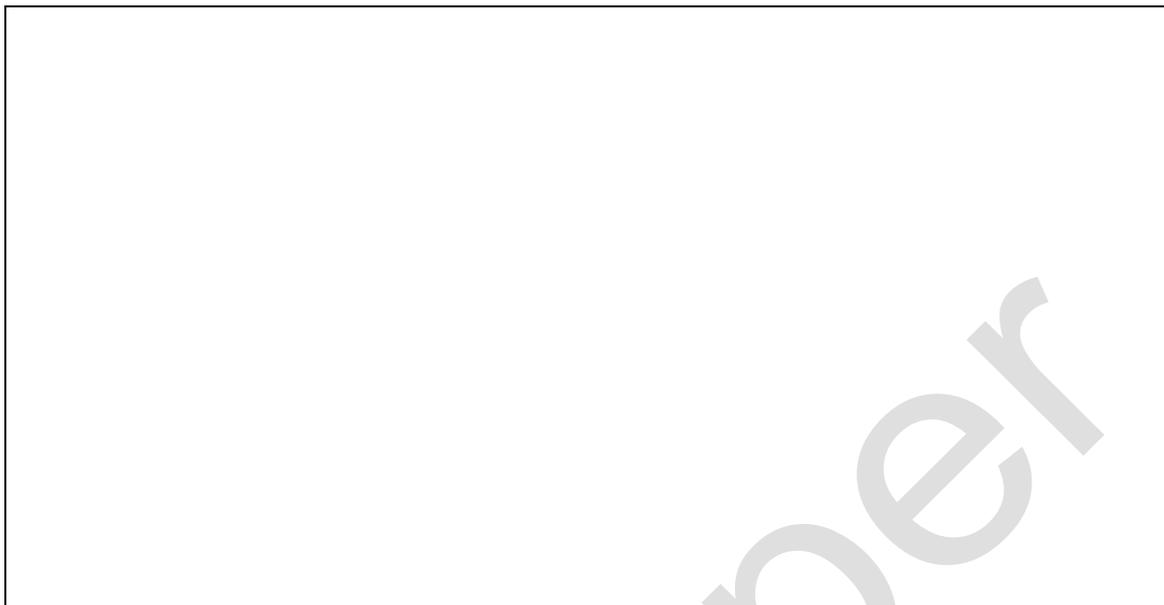
Your answer: **cm²**

4 (c)   Joy is re-organising her office.
She draws a plan view of the office and the furniture to help her.

Joy has a cuboid filing cabinet that is:

- 40 cm wide
- 50 cm long
- 90 cm high.

This is the plan view of the filing cabinet that Joy draws:
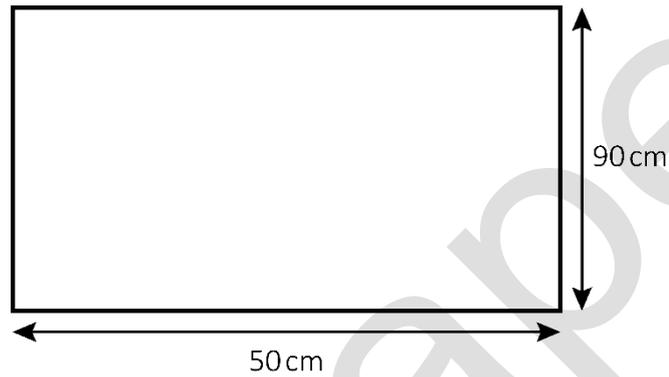
Is the drawing correct? Explain your answer.

[1 mark]

Your answer:

4 (d)   There are some hexagonal tables in student services for students to use.

Draw a hexagon.

[1 mark]
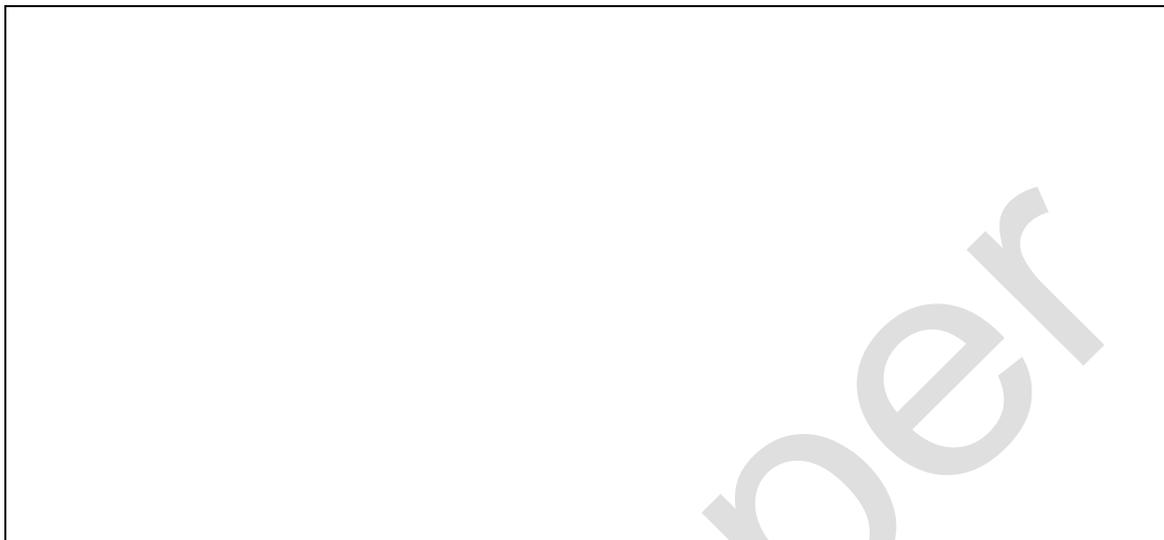
4 (e)   One corner of a table is shown below. An angle is marked.
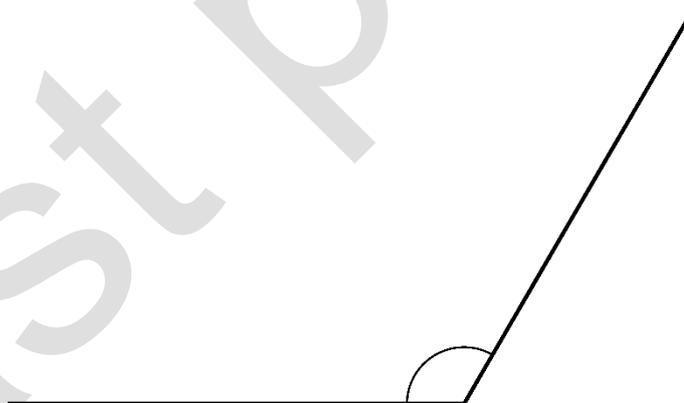
Measure the angle. Give your answer in degrees.

[1 mark]

Your answer: °

Please turn over

4 (f)   What type of angle is shown in **4 (e)**?

Tick the correct answer.

[1 mark]

☐ Acute angle

☐ Obtuse angle

☐ Reflex angle

☐ Right angle

4 (g)   Joy is also responsible for the student services webpages.

There are 4 webpages:

- finance
- well-being
- social
- academic.

The table compares the number of visits to each webpage last year and this year.

|	Visits to webpages			
	Finance	**Well-being**	**Social**	**Academic**
Last year	50%	20%	25%	5%
This year	40%	40%	5%	15%

Last year there were 25 000 visits in total.

This year there were 32 000 visits in total.

Which year had the greater **number** of visits to the **finance** webpage?
Show your working.

[3 marks]

Your answer:

Please turn over

4 (h)   Joy draws this bar chart to represent the data for last year:

Percentage of total visits made to each webpage last year

Percentage of
total visits
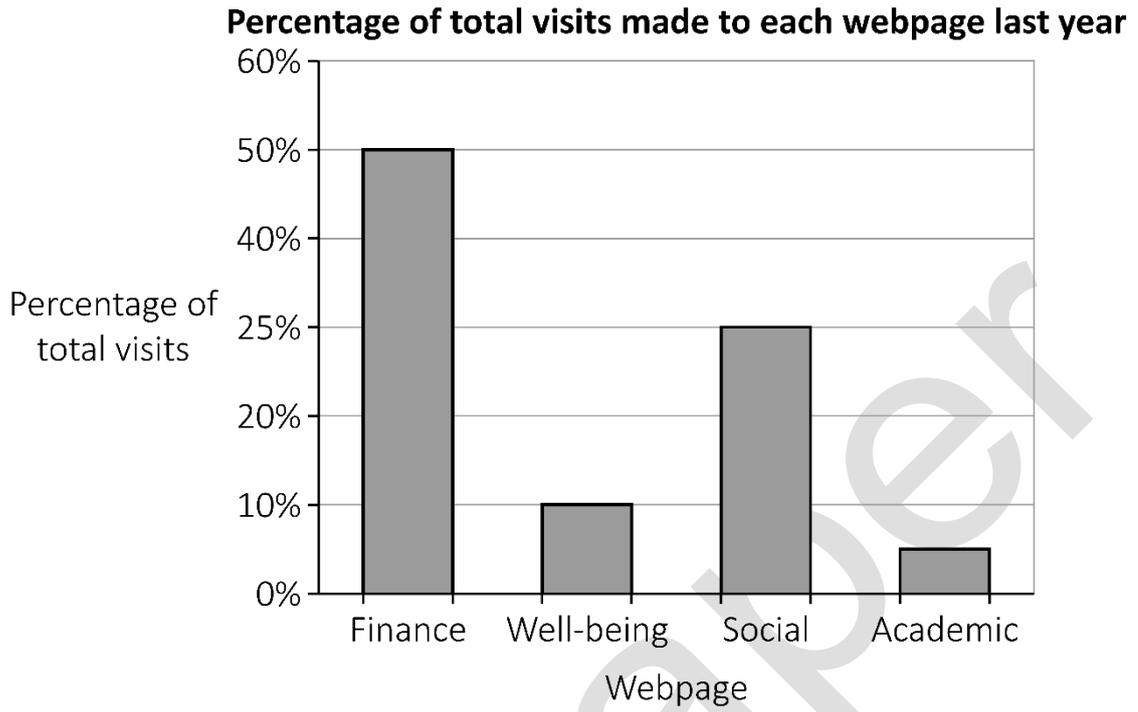
Give **two** reasons why this bar chart is inaccurate.

[2 marks]

1.

2.

4 (i) There is an even chance that the next visit to the finance webpage is made by a female student.

Mark this probability on the probability scale below.

[1 mark]

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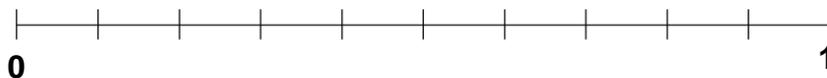
[Total marks: 15]

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