Non-calculator Questions

Edexcel

1.

Greta manages a visitor attraction.
She knows 48 600 people visited the attraction last spring.

Greta says

"There has been a 15% increase in the number of visitors this spring
compared to spring last year."

(a) Work out how many people visited the attraction in spring this year for Greta.

(3)

(b) Use reverse calculations to show a check of your working.

(1)

NCFE

2.

Dennis takes a loan out to buy a car.

He borrows £4000

He will pay 5% interest on the loan.

Calculate £4000 increased by 5%

[2 marks]

Your answer: £

3.

Dennis looks for a car to buy.

There are 396 cars advertised.

25% of them are diesel cars.

What is 25% of 396?

[2 marks]

Your answer:

4.

Including staff and overheads, the total cost of making one mug of tea is 80p

Mel charges 55 % more for a mug of tea than it costs to make.

How much does Mel charge for a mug of tea in the café?
Give your answer in £

[3 marks]

Your answer: **£**

City & Guilds

5.

60% of 300g is

(tick one box)

A   18g

B   50g

C   180g

D   200g

(1 mark)

Highfield

6.

The weekly wage bill for the nursery is £675. They need to reduce this by 20%.

The manager thinks that if the wage bill is reduced by £95, this will be enough.

Is the manager correct?

Show your working out and write the answer in the box below.   *(2 marks)*

Answer: _____

7.

Last year the reserve received £3,700 in donations.

This year has seen a 15% increase in the amount donated.

How much has been donated this year?

Show your working out and write the answer in the box below.   *(2 marks)*

Answer: £ _____

8.

Your salary is £16,500.

Your boss gives you a 5% increase.

How much will your new salary be with a 5% increase?

Show your working out and write the answer in the box below.   *(2 marks)*

Answer: £_____

9.

Exactly 5% of the £79,755 is spent on advertising.

Calculate the amount of money spent on advertising.

Show your working out and write the answer in the box below.   *(2 marks)*

Answer: £_____

AQA

10.

Work out   25% of 76

[1 mark]

_____

_____

Answer _____

Calculator Questions

Edexcel

1.

Holly works at a garage.
Mr Bakir brings his car in for a service.
He also buys 2 tyres and a battery.

Holly has this list of costs

- service £110

- tyres £49.99 each

- battery £89

She uses this list to start to work out the bill for Mr Bakir.

Holly also has to charge 20% VAT on the costs to work out the total bill.

(a) Work out the total bill.

(4)

£

☑

(b) Use estimation to show a check of your answer.

(1)

2.

In June Gemma paid £68 for her electricity.
In July she will pay 5% more for her electricity.

Work out how much Gemma will pay for her electricity in July.

(3)

£

3.

Matteo works for the local council.
The council has 1260 grit bins.

The council will increase the number of grit bins by 5%
Matteo thinks there will be more than 1300 grit bins after the increase.

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

(3)

NCFE

4.

Chester needs 240 tiles.

He buys 10% more tiles in case some of the tiles break.

He cuts $\frac{3}{8}$ of the tiles he buys.

How many tiles does he cut?

[3 marks]

Your answer: **tiles**

5.

Every year, Shaz arranges a football tournament to raise money for charity.

Last year she raised £175

This year her target is to raise 25% more than last year.

What is £175 increased by 25%?

[2 marks]

Your answer:

6.

Calculate 75% of 2744
Give your answer to the nearest hundred.

[2 marks]

Your answer:

7.

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: £

8.

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:

9.

In 2010 scientists said that a 45% reduction of CO_2 emissions was needed by 2030 to avoid average temperatures rising by more than 1.5°C

Global CO_2 emissions were 10 gigatonnes in 2010

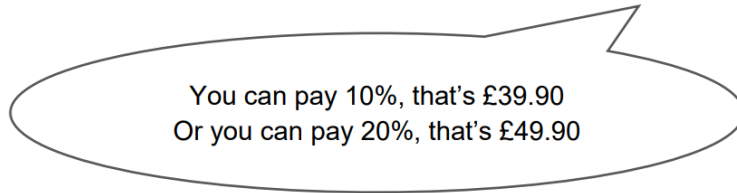What must the CO_2 emissions be by 2030 to avoid the temperature rising by more than 1.5°C?

[2 marks]

Your answer: **gigatonnes**

City & Guilds

10.

A customer wants to buy a sofa. The salesperson says he must pay a deposit.

You can pay 10%, that's £39.90
Or you can pay 20%, that's £49.90

Explain why the salesperson must have made a mistake.

Explanation

(1 mark)

11.

A cricket club sells 5,062 tickets for a charity match. 3,484 are Adult tickets and the rest are Under 18s tickets.

Ticket Prices	
Adults ……………………………£18	
Under 18s……………………… £12	

85% of ticket sales pay for the event. The rest goes to community projects.

How much does the club give to community projects?

Show your working

£ _____

(5 marks)

12.

What is 10% of £68.50?

£ _____

(1 mark)

Highfield

13.

You are working for Highfield Roofing.

Your manager has asked you to calculate the price of a job.

The customer has a budget of £1,000.

The project will need:

- materials costing £426.93
- 1 roofer and 1 apprentice for 3 days of work (08:30 – 17:30)

The roofer is paid £84.50 per day.

The apprentice is paid £4.75 per hour.

Add 20% to the total cost of the job for VAT.

Can the project be completed within the budget?

Show your working out and write the answer in the box below.   *(6 marks)*

Answer: _____

14.

You are working for Highfield Landscape Gardeners.

The owner has asked you to calculate the price of a project for a customer.

The customer has a budget of £6,000

The project will need:

- materials costing £990
- 2 gardeners and 1 labourer for 12 days of work (09:00 – 17:00)

The gardeners are each paid £159.99 per day.
The labourer is paid £8.25 per hour.

Add 20% to the total for VAT.

Can the project be completed within the budget?

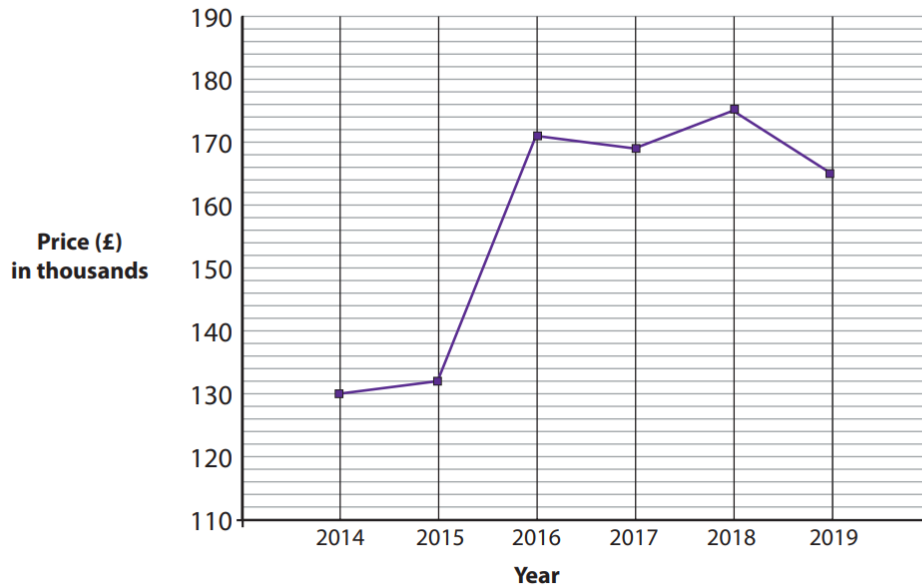Show your working out and write the answer in the box below.   *(6 marks)*

Answer: _____

15.

Ben and Jo research house prices in their area.

They find this graph showing the change in average house prices over the last 5 years.

The estate agent says the average house price has increased by more than 30% from 2014 to 2019.

Is the estate agent correct?

Show your working out and write the answer in the box below.

(4 marks)

Answer: _____

16.

Ben and Jo find a house they like.

The estate agent tells them that the asking price is **one hundred and eighty thousand, three hundred and fifty pounds.**

The estate agent recommends they should offer 20% less.

How much should Ben and Jo offer?

Show your working out and write the answer in the box below.   *(4 marks)*

Answer: £_____

Open Awards

17.

Ryan's team sold 380 tickets for the charity football match.

35% of the tickets sold were for children and 20% of the tickets were sold for senior citizens. The rest of the tickets were sold at full price for adults.

Ryan thinks that 176 tickets were sold at full price for adults.

Is Ryan correct?   (3 marks)

Show your calculations and/or workings out here:

Write your answer in this box.

AQA

18.

Zach gets £23.80 in tips from guests.
He keeps 85% of this money.
He gives the rest to Vikki.

How much money does he give to Vikki?

[3 marks]

Answer £ _____

19.

Increase 250 by 30%

[3 marks]

_____

_____

_____

_____

_____

Answer _____

20.

Work out which is smaller,   15% of 180   or   20% of 120

You **must** show your working.

[3 marks]

_____

_____

_____

_____

_____