

**Non-calculator Questions**

Edexcel

1.

Amanda wants to buy a new mobile phone.  
She sees these two offers for the same mobile phone.

<p style="text-align: center;"><b>Offer A</b></p> <p style="text-align: center;">2 year contract monthly cost £59 and mobile phone cost £39.96</p>
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<p style="text-align: center;"><b>Offer B</b></p> <p style="text-align: center;">SIM only monthly cost £11 and mobile phone cost £889.92</p>
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Amanda says,

'I will save more than £300 in total over 2 years with offer B'.

Use estimation to check if her statement is reasonable.  
You **must** show your working.

(4)

NCFE

2.

Another option is to rent a fully furnished office.

Prices vary according to the length of the rental period.

Rental period	Price per calendar month
1 year	£10 000
5 years	£8500

Calculate the percentage discount per month, if the office is rented for 5 years rather than for 1 year.

[1 mark]

Your answer:	%

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

City & Guilds

3.

The government announces that the minimum wage for people over 25 years old will increase from £8.21 to £8.72 per hour.

A 26 year old woman works 30 hours a week and is paid the minimum wage.

She thinks that the extra money she will earn will cover a rent increase of £20 per week.

Is the woman correct? Show your calculation.

**Decision** (*tick one*) **yes**  **no**

**Calculation**

(1 mark)

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

Highfield

4.

You pick up this leaflet when visiting the bank:



You put £900 into the Highfield Bank Premium Savings Account for 2 years.

**Calculate the total amount of interest you will earn after 2 years (compound interest).**

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

*(3 marks)*

Answer: £\_\_\_\_\_

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

5.

The company selling the billboard is offering a discount.

The regular price of the billboard is £620 per month.

They are offering a discount of 12.5% from the regular price.

**What is the new monthly cost?**

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

*(2 marks)*

Answer: £ \_\_\_\_\_

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

6.

You are looking to buy shares in Highfield Advertising and Promotions. Your manager tells you that:

- you will receive 3% interest on the money you invest
- the interest will be applied annually
- the minimum investment time is 3 years

You decide to invest £950 for 3 years.

**Calculate the compound interest you will earn after 3 years.**

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

*(4 marks)*

Answer: £ \_\_\_\_\_

AQA

7.

Sally will be going with her son, who is a child.

The holiday will be for **2 weeks**.

She sees offers for two holidays.

<p style="text-align: center;"><b><u>Thailand</u></b></p> <p>Adult price: £450 per week</p> <p>Child price: 40% discount off adult price</p> <p style="text-align: center;"><b><u>Special Offer:</u></b></p> <p>Stay 2 weeks, get <math>\frac{1}{6}</math> off <b>total</b> cost</p>
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<p style="text-align: center;"><b><u>Hawaii</u></b></p> <p>Adult price: £660 per week</p> <p>Child price: 10% discount off adult price</p> <p style="text-align: center;"><b><u>Special Offer:</u></b></p> <p>2nd week free</p>
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Which holiday is cheaper, Thailand or Hawaii?

You **must** show your working.

[7 marks]

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Answer \_\_\_\_\_





### Calculator Questions

Edexcel

1.

Megan is the manager of a computer shop.  
She organises a sale with 18% off all tablets.

Megan changes the price of one tablet from £389 to £330.98

(a) Has Megan changed the price correctly?

(3)



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

(1)

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

2.

Gabi wants to buy a flat.  
The cost of the flat is £175 000

The bank uses this formula to work out the mortgage Gabi can get.

$$M = 4.625A$$

M = mortgage (£)  
A = annual income (£)

Gabi has an annual income of £34 000  
She will have to pay a deposit for the flat.  
The deposit is the difference between the cost of the flat and the mortgage.

(a) Work out the deposit Gabi will have to pay.

(3)

£

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

3.

Gabi invests £4000 for 3 years.  
The investment earns 2% compound interest per annum.

(b) Work out the value of the investment at the end of 3 years.

(3)

£

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

4.

Carlos invests £4500 for 3 years.  
He receives compound interest of 1.5% per year.

Carlos thinks the total of the money he invests and the interest will be more than £4750 at the end of the 3 years.

Is he correct?  
Show why you think this.

(3)

NCFE

5.

The printer offers two discounts.

**Offer A**  
Buy 2 boxes of leaflets,  
get the third box half price

**Offer B**  
5% off the total price

A customer wants to buy three boxes of leaflets.

Which offer is cheaper for the customer?

Show how you decide.

**[2 marks]**

St Paper

Your answer:

6.

Faisal starts a new job.

He will work 37 hours a week for 48 weeks a year and is paid £8.25 an hour.

He must pay:

- 0% income tax on the first £12 500 he earns each year
- 20% income tax on anything over £12 500 that he earns.

His income tax payments are spread evenly over the 48 weeks.

Faisal's first weekly wage slip shows that he has paid £8.96 income tax.

He thinks he has paid more than he should.

Is he correct?

Show how you decide.

**[4 marks]**

Blank area for showing the solution to the problem.

Your answer:

Blank box for the final answer.

7.

Xpower offer a Loyalty Plan.

The formula Xpower use to work out the cost for the Loyalty Plan is:

$$(D \times 365) + (P \times G)$$

Where:

D is daily charge (in £)

P is price per kWh (in £)

G is gas used per year (in kWh)

For this plan the charges are:

- Daily charge: 32p
- Price per kWh: 3.10p

Last year Eli's family used 17563kWh of gas.

This cost £719.38

Should Eli's family choose the Loyalty Plan for their gas?

Show your working.

**[2 marks]**

Your answer:

8.

The value of items stolen in Oldcastle has increased by 8% each year.

The value of stolen items in 2017 was £1.7 million.

What was the value of items stolen in 2019?

**[2 marks]**

<p style="font-size: 48px; opacity: 0.2; transform: rotate(-30deg);">DAPPER</p>	
Your answer:	£



9.

Emma sells cars.

The original price of a car was £15 400

Its sale price is £13 500

Calculate the percentage discount.

Give your answer to one decimal place.

**[2 marks]**

ST PAPER	
Your answer:	%

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

10.

A new student takes out a student loan of £1450 for 2 years at a compound rate of 3% per annum.

Work out the amount of interest owed on this loan after 2 years.

**[2 marks]**

Your answer:	£

11.

Abdul wants to buy a new kitchen.

He borrows £15 000 from a bank for 3 years at 9.4% annual compound interest.

Abdul thinks he needs to pay back a total of more than £19 700 at the end of the 3 years.

Is he correct?

Show how you decide.

**[2 marks]**

<p style="font-size: 48px; opacity: 0.2; transform: rotate(-30deg);">PAPER</p>	
Your answer:	

City & Guilds

12.

### Income tax

Everyone can earn a certain amount of money without paying tax. This is called a Personal Allowance. They must pay tax on any earnings over this allowance.

<b>Income tax Personal Allowance, 2018/2019</b>	<b>£11 850</b>
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This formula gives the amount of Income tax a person pays in a year

$$T = 0.2 (y - p)$$

where T = income tax **for the year**  
y = money earned per **year**  
p = Personal Allowance

A caterer earns £1375 per **month**.

How much income tax will she pay for the **year**?

Show all your working.

£ \_\_\_\_\_

(4 marks)

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

13.

A woman applies for a new job that pays £8.50 a week more (after tax).

She will work 5 days a week and drive to work, as she does in her job now.  
The new job is 6 miles further from her house.

**Her car travels 8.5 miles per litre of petrol  
Petrol costs £1.26 per litre**

Will the woman be better off with the new job after she takes the petrol into consideration?

Explain your answer. Include calculations to support your decision.

Decision (yes/no) \_\_\_\_\_

Explanation and supporting calculations

**(4 marks)**

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

14.

Your boss needs you to make some travel arrangements for him.

He will travel to Hull **4 days** every week for the next 6 months (26 weeks).

He needs to arrive at Hull at 8:30am and catch the train home at 5pm each day.

**TRAIN TICKET PRICE INFORMATION**

TRAINS TO HULL

**TICKET TYPE:**

DAY RETURN	£8.00
OFF-PEAK* DAY RETURN	£6.20

**SEASON TICKETS VALID FOR:**

ONE WEEK	£29.60
ONE MONTH	£113.70
ONE YEAR	£1 184.00

**(Price for season ticket covers all travel while the ticket is valid)**

\* **OFF-PEAK** tickets are not valid for travel between 0700 and 0900 or between 1500 and 1900

Which ticket type do you recommend?

Recommendation

Explain your reasons. Include figures or calculations to support your decision.

Explanation and supporting calculations

**(5 marks)**

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

15.

A man has £5000.

He will put his money into a savings account at a bank.

He wants to save it for one year.

Bank A pays 2% compound interest. It adds interest every 6 months.

Bank B pays 3.15% annual interest rate.

Which bank should the man choose?  
Explain your decision. Include calculations to support your decision.

**Decision** (*tick one box*)   **Bank A**    **Bank B**

**Show all your working**

**Explanation and supporting calculations.**

**(4 marks)**

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

16.

A secretary needs to order 8 boxes of paper clips. Each box costs £7.67

The table below shows the discount offered on large orders.

Total order	Discount
£40 - £54.99	5%
£55 - £79.99	6.5%
£80 or more	8%

What amount will the secretary have to pay?

Show your working

£ \_\_\_\_\_

(3 marks)



Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

17.

A 22-year-old man wants to apply for this job.

He wants to work out how much his annual take home pay will be.

**Staff required**  
for busy town centre retail store.

Shifts available 6am – 1pm  
Includes one hour break unpaid.  
6 days per week  
National Minimum Wage

**National Minimum Wage (NMW) rates**

NMW (age)	Apprentice	16-17 years	18-20 years	21-24 years
Rate per hour (£)	£3.90	£4.35	£6.15	7.70

He knows he has to pay income tax and national insurance and what is left is his take home pay.

**TAX INFORMATION**

**Income tax is taken from your earnings after your personal allowance has been deducted.**

**Income Tax rated and bands**

Band	Taxable income	Tax rate
Personal allowance	up to £12 500	0%
Basic rate	£12 501 to £50 000	20%
Higher rate	£50 001 to £150 000	40%

He is told that his national insurance will be about £600 National Insurance in the year.

What will the man's annual pay be?

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

Highfield

18.

A customer wants to take out a personal loan of £1500. They will complete repayments at the end of 6 months (182 days).

The bank offers the following 3 options:

- Option A: At the end of the 6 months, pay back £1500 plus 8p per day for each £500 borrowed
- Option B: At the end of the 6 months, pay back £1500 plus 2.7% interest
- Option C: At the end of the 6 months, pay back £1500 plus a monthly repayment amount of 0.5% of the total amount borrowed

**Which loan option is the cheapest?**

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

*(6 marks)*

Answer: \_\_\_\_\_

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

19.

You work as a lorry driver for Highfield Transport.

You receive your monthly wage slip.

Highfield Transport					
Payments	Units	Rate	Amount	Deductions	Amount
Salary	1	1843.71	£1843.71	PAYE Tax	£
				National Insurance	£
				Pension	£
				Net Pay:	£

Your annual salary is £22,124.48. You have a tax-free allowance of £12,500. You need to deduct PAYE tax and National Insurance on the salary that you earn after this allowance.

PAYE tax is 18.62% on your earnings after your tax-free allowance.

National Insurance is 15.7% on your earnings after your tax-free allowance.

Your pension is 3% of your total monthly salary, before any tax deductions.

**Complete your monthly wage slip above, calculating the PAYE tax, National Insurance, Pension and Net Pay.**

Show any workings in the box below.

*(5 marks)*

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

20.

You also make candles which you sell on your online craft shop.

You sell candles for £6.75 each and photo frames for £8.99 each.

58% of the selling price is profit for each item.

Last month you sold 46 candles and 31 photo frames.

You estimate it takes 30 minutes to make each candle and 1.5 hours to make each photo frame.

**Calculate how much profit you earn per hour.**

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

*(6 marks)*

Answer: £ \_\_\_\_\_

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

21.

The table below shows how much Highfield Ground Maintenance pays its staff:

Working Day	Rate
Monday to Friday	Hourly rate
Saturday	Hourly rate $\times 1\frac{1}{4}$
Sunday	Double Hourly rate

Last week you worked  $7\frac{1}{2}$  hours each day on Monday to Friday, 4 hours on Saturday and 3 hours on Sunday.

The hourly rate is £8.90.

Each week your employer deducts 20% to pay your tax.

**How much did you earn last week, after tax?**

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

*(6 marks)*

Answer: £ \_\_\_\_\_

Level 2 Maths Money, Compound Interest, Percentage Increase/Decrease and Discount Exam Questions

22.

You are working at Highfield Farm.

You are buying a new tractor.

You will be getting a loan for the full cost of the tractor.

- The tractor will cost £64,950.
- The **compound interest** rate is 4% per annum, which will be added to the total cost of the tractor up front.
- You will pay back the loan in 36 equal monthly payments.

**What will you pay each month?**

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

*(5 marks)*

Answer: £ \_\_\_\_\_

Open Awards

23.

Tom is given £8 500 to go towards a deposit to buy his first house.

Tom sees these two savings accounts.

Money saver account	Bonus saver account
1.75% per year. To be added at the end of each year.	Save for 3 years and receive a single bonus of 5.25%

Tom puts his money in the Money saver account.

How much more money will Tom have after 3 years compared to the Bonus Saver account?

(5 marks)

Show your calculations and/or workings out here:

Write your answer in this box.











27.

Marco is about to start university.

The table shows his total expected income for the **year**.

	Amount (£)
<b>Student loan</b>	8700
<b>Part-time job</b>	4800

Marco budgets for the following expenses each **month** for 12 months.

	Amount per month (£)
<b>Accommodation</b>	589.00
<b>Living expenses</b>	186.00
<b>Entertainment</b>	65.00
<b>Travel</b>	87.50

Marco will save any income that he does not spend.

How much does he expect to save in the **year**?

**[4 marks]**

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Answer £ \_\_\_\_\_

28.

On Marco's 14th birthday, his parents put £2000 into a bank account for him.

The account pays compound interest at a rate of 1.5% per annum.

Marco can access the account on his 21st birthday.

How much will be in the account on his 21st birthday?

**[3 marks]**

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Answer £ \_\_\_\_\_

29.

Steph works out the cost of her trip, including the return journey.

She will use her car to drive 108 miles **each way**.

She and her 3 friends will share the cost of fuel equally.

Her car travels 12.5 miles per litre of fuel.

Fuel costs 128.8p per litre.

Steph will also pay

£3 for a return train ticket

£30 for a match ticket

£8 for food.

Work out the total amount Steph will pay for her trip.

**[6 marks]**

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Answer £ \_\_\_\_\_

