

Countdown to your final Maths exam ...

Crossover ... Part 4 (2020)

	Marks	Actual	  
Q1. Simple interest (Clip 11)	3		
Q2. Compound interest (Clip 11)	3		
Q3. Use of Calculator (Clip 3) Standard form (Clips 19/20)	5		
Q4. Compound interest (Clip 11)	3		
Q5. Compound interest (Clip 11) Reverse percentages (Clip 13)	6		
Q6. Depreciation (Clip 12)	3		
Q7. Use of Calculator (Clip 3)	3		
Q8. Depreciation (Clip 12)	4		
Q9. Use of Calculator (Clip 3)	3		
	33		

NON-CALCULATOR UNLESS SPECIFIED



Questions



- Q1.** Jane invests £300 at a simple interest rate of 4.5% per year.
At the end of each year Jane gives the interest to a charity.

Work out the least number of years it will take for the total amount given to the charity to be greater than £50

(3)

- Q2.** Charlie invests £1200 at 3.5% per annum compound interest. Work out the value of Charlie's investment after 3 years.



(3)

- Q3.** (a) (i) Use your calculator to work out $\frac{\sqrt{46.2 - 17.5}}{2.39 \times 0.7}$

Write down all the figures on your calculator display.

- (ii) Give your answer to (i) correct to 3 significant figures.



(3)

- (b) Work out $(2.34 \times 10^5) \times (5 \times 10^4)$ Give your answer in standard form.

(2)

- Q4.** Franz invests £2500 for 2 years at $3\frac{1}{2}\%$ per annum compound interest.
Work out the value of his investment at the end of 2 years.



(3)

- Q5.** Katie invests £200 in a savings account for 2 years.
The account pays compound interest at an annual rate of

3.3% for the first year
1.5% for the second year



- (a) Work out the total amount of money in Katie's account at the end of 2 years.

(3)

Katie travels to work by train.

The cost of her weekly train ticket increases by 12.5% to £225

Katie's weekly pay increases by 5% to £535.50

(b) Compare the increase in the amount of money Katie has to pay for her weekly train ticket with the increase in her weekly pay.

(3)

Q6. Martin bought a computer for £1200 At the end of each year the value of the computer is depreciated by 20%.

After how many years will the value of the computer be £491.52? You must show your working.

(3)

Q7. Use your calculator to work out $\frac{\sqrt{70.25}}{4.2-2.37}$

(a) Write down all the figures on your calculator display.
You must give your answer as a decimal.



(2)

(b) Write your answer to part (a) correct to 4 decimal places.

(1)

Q8. Becky buys a new car for £20 000

The value of this car will depreciate

by 15% at the end of the first year
then by 10% at the end of every year after the first year.

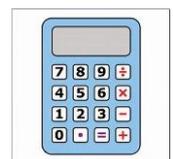
After how many years will the car have a value of less than £15 000?

You must show all your working.

(4)

Q9. Use your calculator to work out

(a) $\sqrt[3]{42.875}$



(1)

(b) $\frac{3.4 \times 5.2}{2.6 - 0.39}$

(2)