Countdown to your final Maths exam ... Part 2 (2018)

JustMaths CrossOver

	Marks	Actual	☹ 😐 🙂
Q1. Estimation (Clip 70)	3		
Q2. Best Value (Clip 7)	4		
Q3. Cost per unit	4		
Q4. Rounding (Clip 9)	1		
Q5. Solving money problems	4		
Q6. Best Value (Clip 7)	3		
Q7. Solving money problems	4		
Q8. Rounding and error interval (Clip 9)	2		
Q9. Best Value (Clip 7)	3		
Q10. Estimation (Clip 70)	3		
Q11. Compound Interest (Clip 11)	4		
Q12. Best Value (Clip 7)	3		
Q13. Depreciation (Clip 12)	2		
Q14. Rounding (Clip 9)	1		
Q15. Solving money problems	5		
Q16. Estimation (Clip 70)	4		

50

Questions

Q1. Work out an estimate for the value of $\dfrac{43.2 \times \sqrt{99.05}}{0.193}$

(3)

Q2. A shop sells toothpaste in 3 different sizes of tube.
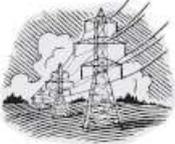
A 70 m/tube of toothpaste costs £1.79

A 100 m/tube of toothpaste costs £2.75

A 150 m/tube of toothpaste costs £3.99

Which size of tube is the best value for money?

(4)

Q3. Here is part of Jo's electricity bill.

Work out how much Jo has to pay for the units she has used.

(4)

Q4. Write 5.5454 correct to 2 decimal places.

(1)

Q5. Yusuf is planning a disco party at his Youth Club. Here are his costs.

Mobile Disco	£230
Hire of room	£150
Other costs	£30
Food	£12 per person

Yusuf charges £16 per ticket. He sells 100 tickets.

Is there enough money from the ticket sales for Yusuf to pay all his costs?
You must show your working.

(4)

Q6. Blueberries are sold in small cartons and in large cartons.

Blueberries
125 g
£1.60

small carton

Blueberries
225 g
£2.80

large carton

There are 125 g of blueberries in a small carton.
Each small carton costs £1.60

There are 225 g of blueberries in a large carton.
Each large carton costs £2.80

Which size of carton is the better value for money?

(3)

Q7. Jerry is making some shelves.

He needs
      5 pieces of wood of length 65 cm
      2 pieces of wood of length 110 cm.

The wood is sold in three different lengths.
Information about these lengths is shown in the table.

Length	Cost
100 cm	£21
150 cm	£25
180 cm	£28

Jerry wants to pay as little money as possible.
How much will Jerry have to pay?

(4)

Q8. Jim rounds a number, x, to one decimal place. The result is 7.2

Write down the error interval for x.

(2)

Q9. A shop sells pencils at
     12p each
  or 12 pencils in a box at £1.65 per box.

Oliver buys 36 pencils.
He spends the least amount of money.

How much does he spend?

(3)

Q10. Work out an estimate for $\dfrac{31 \times 9.87}{0.509}$

(3)

Q11. Anya has £40 000 to invest. She is going to invest in a scheme from either the building society or the bank.
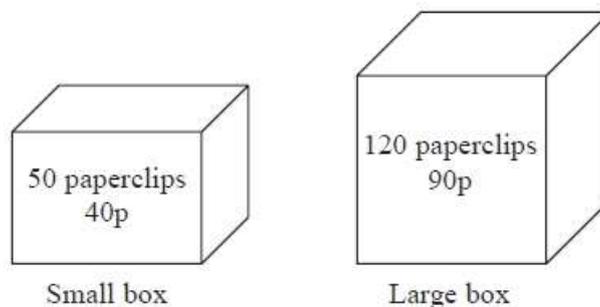
	Scheme
Building Society	Invest £40 000 in an account at 3% per annum compound interest for 2 years.
Bank	Invest £40 000 in a bond that pays £2550 interest at the end of 2 years.

Anya wants to invest in the scheme that gives the most interest.

Which scheme should Anya invest in?

(4)

Q12. Paperclips are sold in boxes.

Small box   Large box

A small box has 50 paperclips and costs 40p.
A large box has 120 paperclips and costs 90p.

Which box is the better value for money?

(3)

Q13. The value of a van depreciates at the rate of 20% per year.

Gary buys a new van for £27 500
After *n* years the value of the van is £11 264

Find the value of *n*.

(2)

Q14. Write 7.264 51 correct to 3 decimal places.

(1)

Q15. Fraya is planning a chess competition. Here are the costs.

Prizes	Food and drink	Room
First prize £50		£168
Second prize £25		15% discount on Saturdays.
Third prize £15	£225	

The competition will be on a Saturday.

There will be 48 players in the competition.
Each player will pay an entry fee of £9.50

Will Fraya get enough money from the entry fees to pay all the costs?

(5)

Q16. A unit of gas costs 4.2 pence.

On average Ria uses 50.1 units of gas a week.
She pays for the gas she uses in 13 weeks.

(a) Work out an estimate for the amount Ria pays.

(3)

(b) Is your estimate to part (a) an underestimate or an overestimate? Give a reason for your answer.

(1)