Countdown to your final Maths exam ...
Part 1 (2019)

	Marks	Actual	🙁 😐 🙂
Q1. Sample-Space diagrams	7		
Q2. Product of prime factors (Clip 4)	2		
Q3. Profit	4		
Q4. Multiples in context (Clip 5)	3		
Q5. Best Value (Clip 7)	4		
Q6. Frequency trees (Clip 2)	3		
Q7. Two-way tables (Clip 1)	4		
Q8. Rates of pay	5		
Q9. Estimation (Clip 70)	4		
Q10. Product of prime factors (Clip 4)	2		
Q11. Money Problem	3		
Q12. Two-way tables (Clip 1)	4		

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Questions

Q1. Matt plays a game with two sets of cards.

Set A | 1 | 2 | 4 | 5 | 7 |

Set B | 3 | 6 | 8 | 9 |

Matt takes at random one card from each set. He adds the numbers on the two cards to get the total score.

(a)   Complete the table to show all the possible total scores.

	Set A				
	1	2	4	5	7
Set B 3	4	5	7	8	10
6	7	8	10		
8					
9					

(1)

(b)   What is the probability that Josh's total score will be greater than 12?

(2)

Matt's year group are raising money for charity.

   60 students are each going to play Matt's card game once.
   Each student pays 50p to play the game.

   Matt pays £1.50 to any player getting a total of 8

(c)   Show that Matt can expect to make a profit of £21 from his game.

(4)

Q2. Write 36 as a product of its prime factors.

(2)

Q3. Jo buys

      120 bunches of daffodils for a total of £80

        and 80 bunches of tulips for a total of £50

Jo then sells the flowers in a market.

In the morning, Jo sells

      75 bunches of the daffodils for 80p a bunch

      and 50 bunches of the tulips for 90p a bunch.

In the afternoon, Jo sells all the bunches of flowers she has left for 20p a bunch.

Does Jo make a profit? You must show all your working.

(4)

Q4. Mel and Rob set the alarms on their phones to sound at 6.45 am.

      Both alarms sound together at 6.45 am.

      Mel's alarm then sounds every 9 minutes.

      Robs alarm then sounds every 12 minutes.

At what time will both alarms next sound together?

(3)

(and for no marks … after how many presses of the snooze button does Mel eventually get out of bed?)

Q5. Tea bags are sold in three sizes of box.

Small
50 bags
£2.15

Medium
80 bags
£3.30

Large
125 bags
£5.18

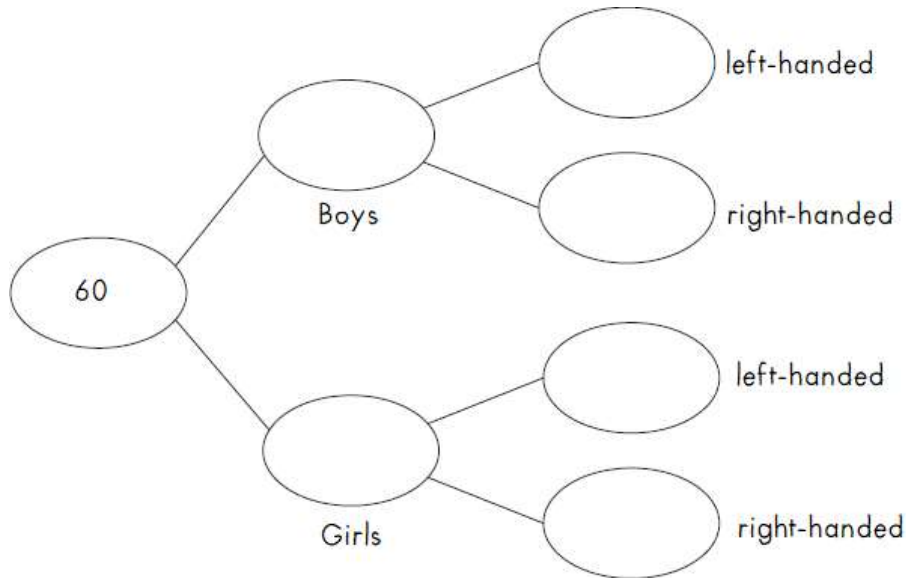Which size of box is the best value for money?

(4)

Q6. The below gives information about a group of students

22 of the 60 students are boys.   16 of the 34 right-handed students are girls.

Complete the frequency tree for this information.

(3)

Q7. 66 people went on a day trip.

Each person did only one activity on the trip. Each person went skating or went to an art gallery or went bowling.

43 of the people are female.   4 of the 10 people who went skating are male.
20 of the people went to the art gallery.   10 males went bowling.

Work out the number of females who went to the art gallery.

(4)

Q8. On Monday Laura earned £120 She worked for 8 hours.

(a) Work out Laura's hourly rate of pay.

(2)

          On Monday Laura earned £120   On Tuesday she earned £100

Laura earned the same amount of money on Wednesday, on Thursday and on Friday.

She earned a total of £550 for these five days.

(b) How much Laura Alex earn on Wednesday?

(3)

Q9. Christian organised an event for a charity.

Each ticket for the event cost £19.50   Christian sold 485 tickets.

Christian paid costs of £7000   He gave all money left to the charity.

(a) Work out an estimate for the amount of money Christian gave to the charity.

(3)

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

(1)

Q10. Express 56 as the product of its prime factors.

(2)

Q11. Vinnie buys

one loaf of bread costing £1.18   one tub of butter costing 94p
two jars of jam.   Vinnie pays with a £5 note.
He gets 30p change.

Work out the cost of one jar of jam.

(3)

Q12. Milk is sold in $\frac{1}{2}$ pint bottles, in 1 pint bottles and in 2 pint bottles.

One weekend a shop sold 100 bottles of milk.

46 of the bottles were sold on Sunday.
15 of the bottles sold on Sunday were 2 pint bottles.
31 of the bottles sold on Saturday were $\frac{1}{2}$ pint bottles.
22 of the bottles sold were 2 pint bottles.
30 of the bottles sold were 1 pint bottles.

How many 1 pint bottles were sold on Sunday?

(4)