




# COUNTDOWN TO YOUR FINAL MATHS EXAM ... PART 4

	Marks	Actual	  
Q1. Percentages/Fractions	4		
Q2. Percentages/Fractions	3		
Q3. Percentages/Fractions	5		
Q4. Probability	3		
Q5. Probability	3		
Q6. Probability from a table	4		
Q7. Probability from a table	6		
Q8. Probability Tree diagrams	7		
Q9. Probability	6		
Q10. Probability	7		
Q11. Plans & elevations	2		
Q12. Plans & elevations	2		
Q13. Plans & elevations	4		

**Q1.**

One day a supermarket has 8420 customers.

65% of the customers pay with a debit card.

$\frac{1}{5}$  of the customers pay with a credit card.

The rest of the customers pay with cash.

Work out how many customers pay with cash.

.....

**(Total for Question is 4 marks)**

**Q2.**

Callum wins £300 in a raffle.

He gives 5% of the £300 to charity.

He saves  $\frac{2}{5}$  of the £300

He uses the rest of the money to buy clothes.

Work out how much of the money Callum uses to buy clothes.

£.....

**(Total for question = 3 marks)**

**Q3.**

Pete and Sue are going to take their children to France.

They will travel together on the same ferry.

They will travel with one of two ferry companies, Easy Ferry or Seawagon.

The tables give information about the costs for each adult and each child to travel with these ferry companies.

Easy Ferry	July			August		
	1 - 10	11 - 21	22 - 31	1 - 10	11 - 21	22 - 31
Adult	£32.00	£36.50	£39.50	£42.25	£42.25	£37.75
Child	£18.00	£20.25	£23.75	£25.85	£25.85	£21.00

Seawagon	July			August		
	1 - 10	11 - 21	22 - 31	1 - 10	11 - 21	22 - 31
Adult	£33.50	£37.50	£40.25	£43.85	£44.95	£38.50
Child	£17.25	£19.75	£21.85	£24.65	£23.95	£19.95

The table below gives information about the discount they will get from each ferry company if they book early.

Early booking discount	
Easy Ferry	$\frac{1}{3}$ off
Seawagon	25% off

Pete and Sue have three children.

They will travel on 25 July.

They will book early.

Pete and Sue will travel with the cheaper ferry company.

Which ferry company?

You must show all your working.

**(Total for Question is 5 marks)**

**Q4.**

Denzil has a 4-sided spinner.

The sides of the spinner are numbered 1, 2, 3 and 4

The spinner is biased.

The table shows each of the probabilities that the spinner will land on 1, on 3 and on 4

The probability that the spinner will land on 3 is  $x$ .

<b>Number</b>	1	2	3	4
<b>Probability</b>	0.3		$x$	0.1

(a) Find an expression, in terms of  $x$ , for the probability that the spinner will land on 2 Give your answer in its simplest form.

..... (2)

Denzil spins the spinner 300 times.

(b) Write down an expression, in terms of  $x$ , for the number of times the spinner is likely to land on 3

..... (1)

**(Total for Question is 3 marks)**

**Q5.**

There are female and male students at a disco.

One of these students is chosen at random.

The probability that this student is male is  $\frac{2}{5}$

There are 96 female students at the disco.

Work out the total number of students at the disco.

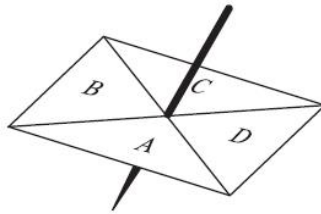
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**(Total for Question is 3 marks)**

**Q6.**

Sandy has a 4-sided spinner.  
The sides of the spinner are labelled A, B, C and D.  
The spinner is biased.

The table shows the probability that the spinner will land on A or on B or on C.



Side	A	B	C	D
Probability	0.15	0.32	0.27	

(a) Work out the probability that the spinner will land on D.

..... (2)

Sandy spins the spinner 300 times.

(b) Work out an estimate for the number of times the spinner will land on A.

..... (2)

**(Total for Question is 4 marks)**

**Q7.**

Mary plays a game of throwing a ball at a target.

The table shows information about the probability of each possible score.

<b>Score</b>	0	1	2	3	4	5
<b>Probability</b>	0.09	$x$	$3x$	0.16	0.21	0.30

Mary is 3 times as likely to score 2 points than to score 1 point.

(a) Work out the value of  $x$ .

..... (3)

Mary plays the game twice.

(b) Work out the probability of Mary scoring a total of 8

..... (3)

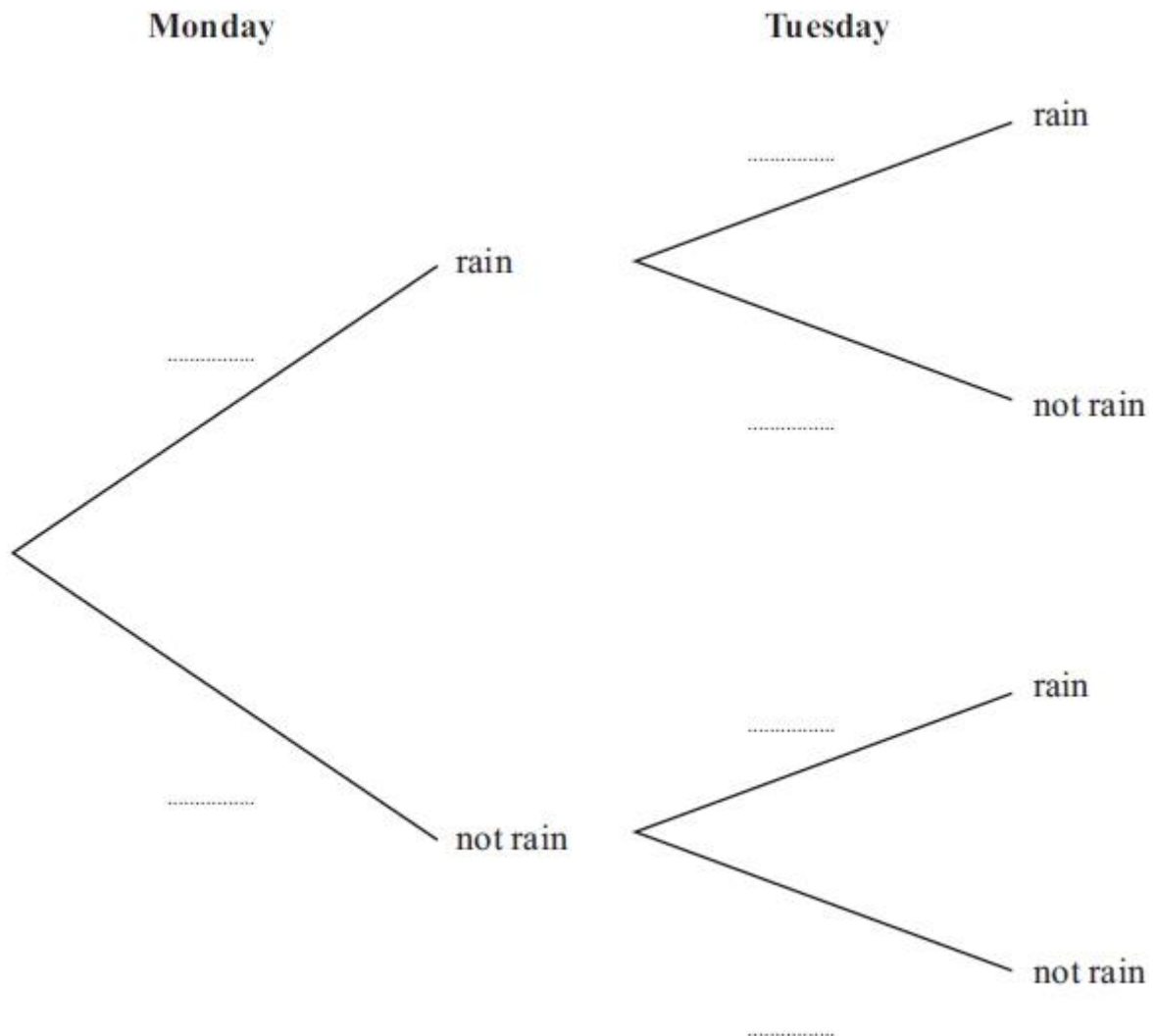
**(Total for Question is 6 marks)**

**Q8.**

The probability that it will rain on Monday is 0.6

When it rains on Monday, the probability that it will rain on Tuesday is 0.8

When it does **not** rain on Monday, the probability that it will rain on Tuesday is 0.5



(a) Complete the probability tree diagram.

(2)

(b) Work out the probability that it will rain on both Monday and Tuesday.

..... (2)

(c) Work out the probability that it will rain on at least one of the two days.

..... (3)

**(Total for Question is 7 marks)**

**Q9.**

Lily and Anna take a test.

The probability that Lily will pass the test is 0.6

The probability that Anna will pass the test is 0.8

(a) Work out the probability that both of these girls fail the test.

..... (3)

(b) Work out the probability that both of these girls pass the test or that both of these girls fail the test.

..... (3)

**(Total for Question is 6 marks)**

**Q10.**

Isobel plays a game against Eric.

Isobel is twice as likely as Eric to win the game.

The probability that the game is drawn is 0.1

(a) Work out the probability that Eric wins the game.

..... (2)

Isobel and Eric play the game three times.

(b) Work out the probability that all three games are drawn.

..... (2)

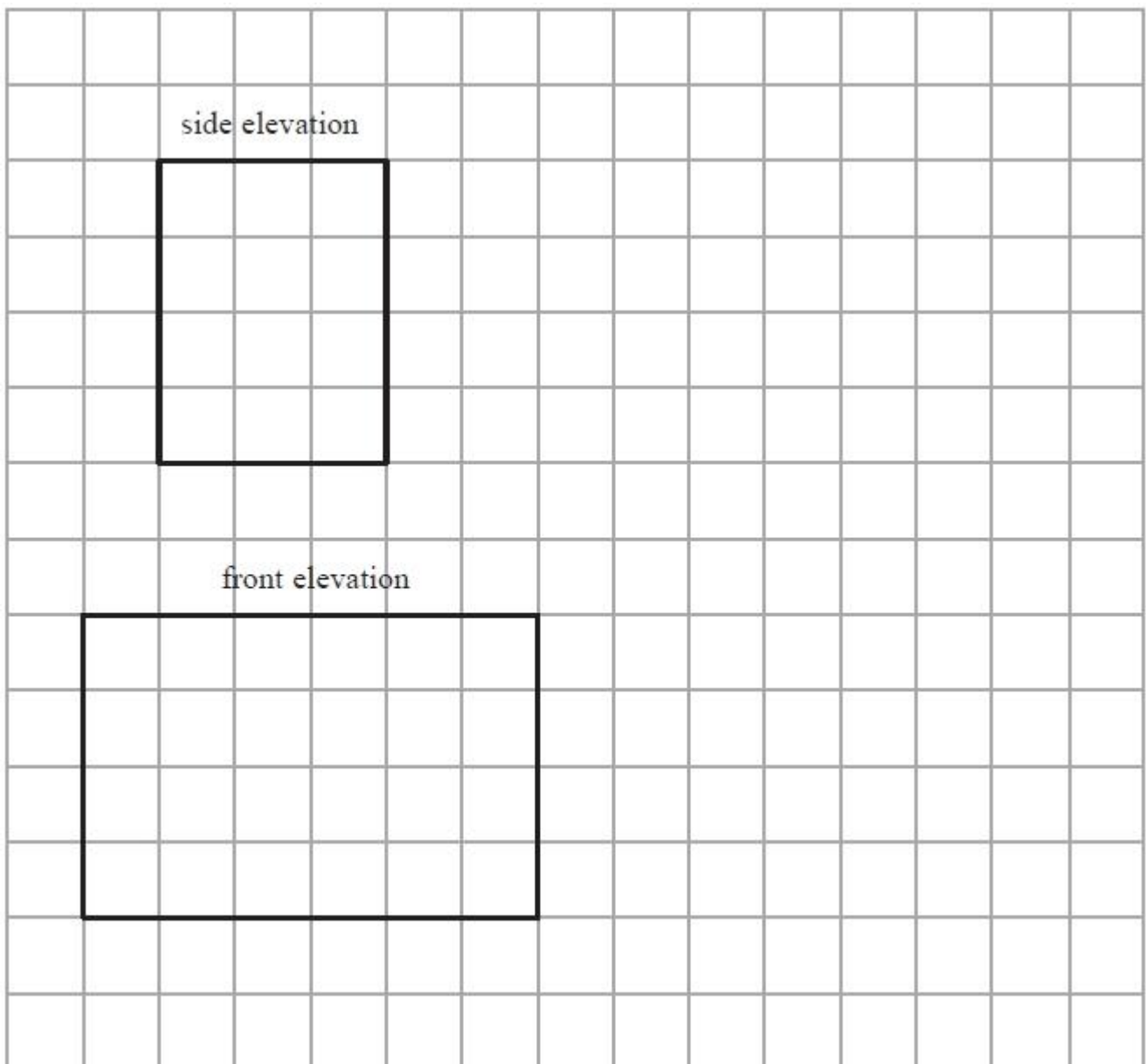
(c) Work out the probability that Eric wins at least one of the three games.

..... (3)

**(Total for Question is 7 marks)**

**Q11.**

The side elevation and the front elevation of a cuboid are drawn on the centimetre grid.



On the grid, draw an accurate plan of the cuboid.

**(Total for Question is 2 marks)**



**Q12.**

Here is a solid prism.

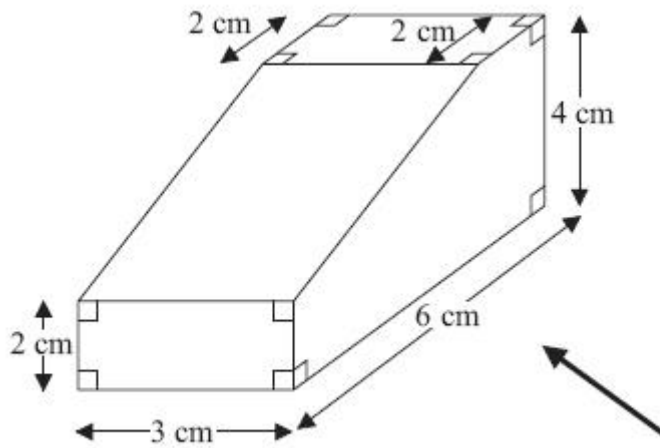
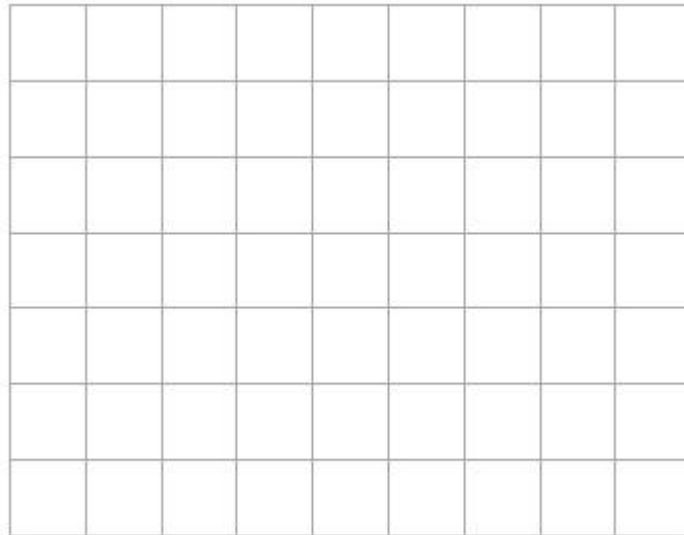


Diagram **NOT**  
accurately drawn

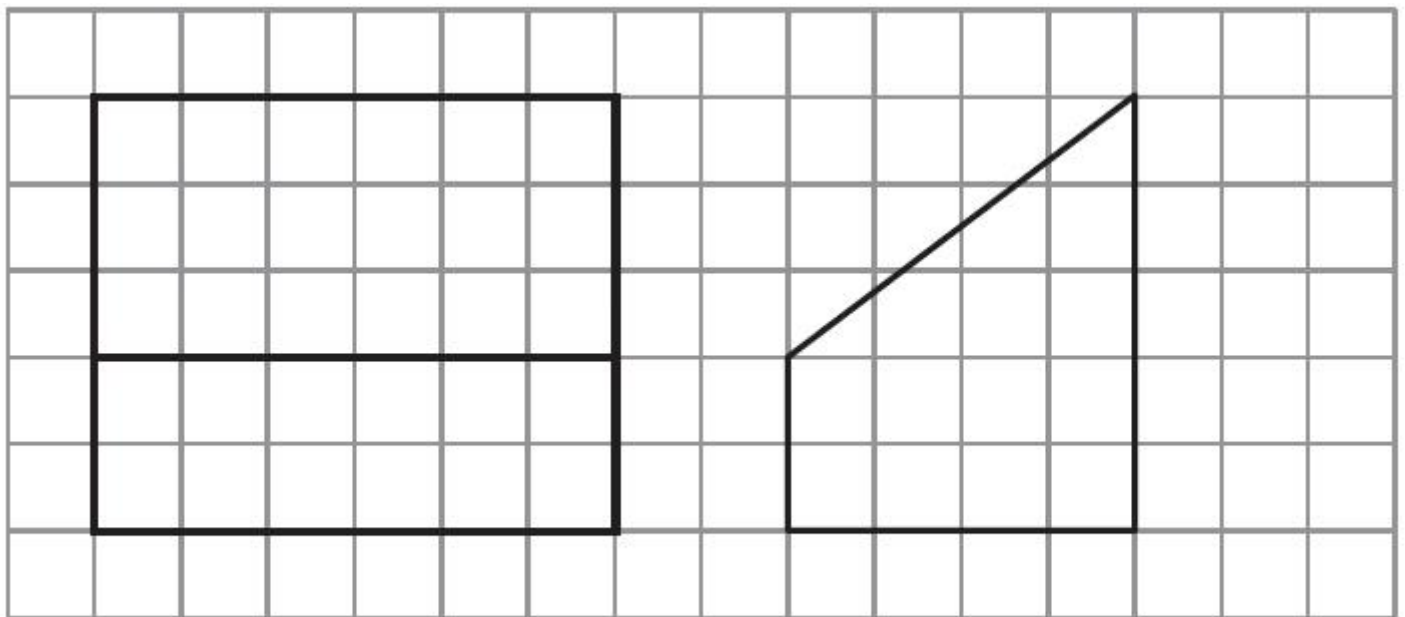
On the grid, draw an accurate side elevation of the solid prism from the direction of the arrow.



**(Total for Question is 2 marks)**

**Q13.**

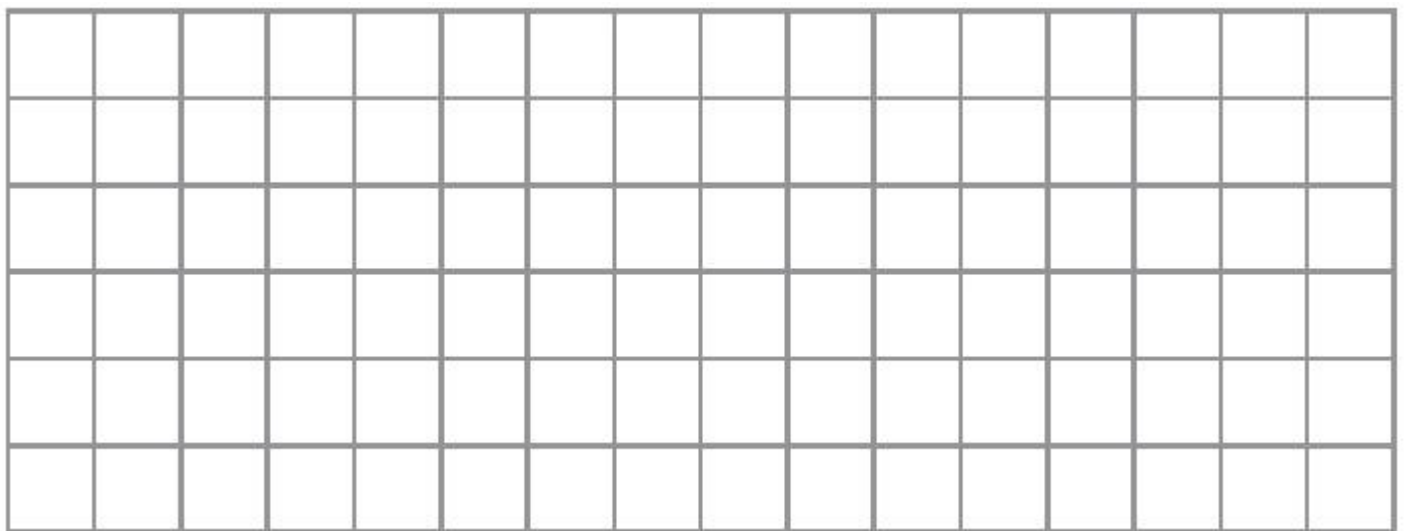
The diagram shows the front elevation and the side elevation of a prism.



Front elevation

Side elevation

(a) On the grid, draw a plan of this prism.



(2)

(b) In the space below, draw a sketch of this prism.

(2)

**(Total for Question is 4 marks)**