GCSE Mathematics

tinyurl.com/TMSRev2B

Unit 2: Calculator Allowed

Intermediate Tier

County Revision Paper 2B

(Topics Relating to ***Data & Probability***)

30 Minutes

School: _____

Student Name: _____

Question	Maximum Mark	Mark Awarded
1	3	
2	5	
3	4	
4	6	
5	3	
6	4	
7	5	

1. The following cards spell out the name Ystradgynlais.

In an experiment, the cards are turned face down and rearranged.
A card is selected at random and the letter on the card is recorded.

The experiment is carried out 650 times.

How many times would you expect a vowel to be recorded? [3]

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2. Josie wants to test if a coin is biased.
She flips the coin 30 times.
Here are here results.

H T H T H H H T H H
H T H H H T H H H T
H H H H T H H H T H

(a) Complete the relative frequency table.

	Heads	Tails
Relative frequency		

(2)

(b) Do you think the coin is biased?
Explain your answer.

.....

.....

(1)

(c) Josie decides to flip the coin 150 times.
Calculate an estimate of the number of times that the coin will land on tails.

.....

(2)

3. Shown below are five cards which are arranged in order from smallest to largest

The range of the cards is 4.
The median of the cards is 8.
The mean of the cards is 7.

Work out the 4 missing numbers.

....., ..., ... and .....

(4)

4. A football team played six games.

Here are the number of goals they scored in each game:

6 0 3 2 2 5

(a) Work out the median number of goals scored.

.....

(2)

(b) Work out the mean number of goals scored.

.....

(2)

The football team play one more game.
The mean number of goals scored increases to 4.

(c) Work out the number of goals scored in the seventh game.

.....

(2)

5. In a game, it is possible for **each** player to score between 1 and 10 points.
Lois and Beca play the game five times.

The table below shows the points scored by Lois in each game.

	Game 1	Game 2	Game 3	Game 4	Game 5
Lois	5	2	8	5	1
Beca					

Beca had a higher mean score than Lois.
Beca had a lower median score than Lois.
Beca had a lower range of scores than Lois.

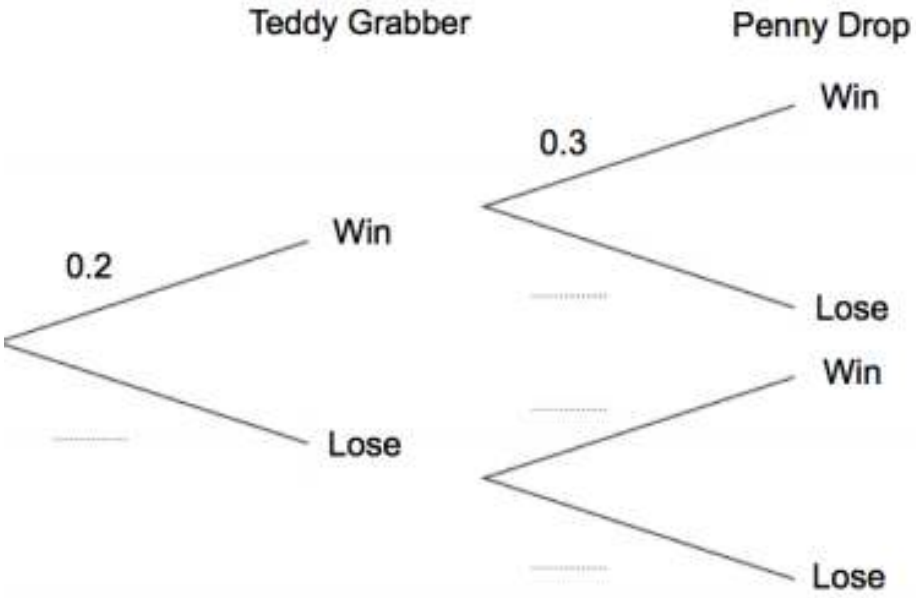
Complete the table above with a set of possible scores gained by Beca. [3]

6. James goes to an arcade.

He has one go on the Teddy Grabber.
He has one go on the Penny Drop.

The probability that he wins on the Teddy Grabber is 0.2.
The probability that he wins on the Penny Drop is 0.3.

(a) Complete the tree diagram.



(2)

(b) Work out the probability that James wins on the Teddy Grabber and he also wins on the Penny Drop.

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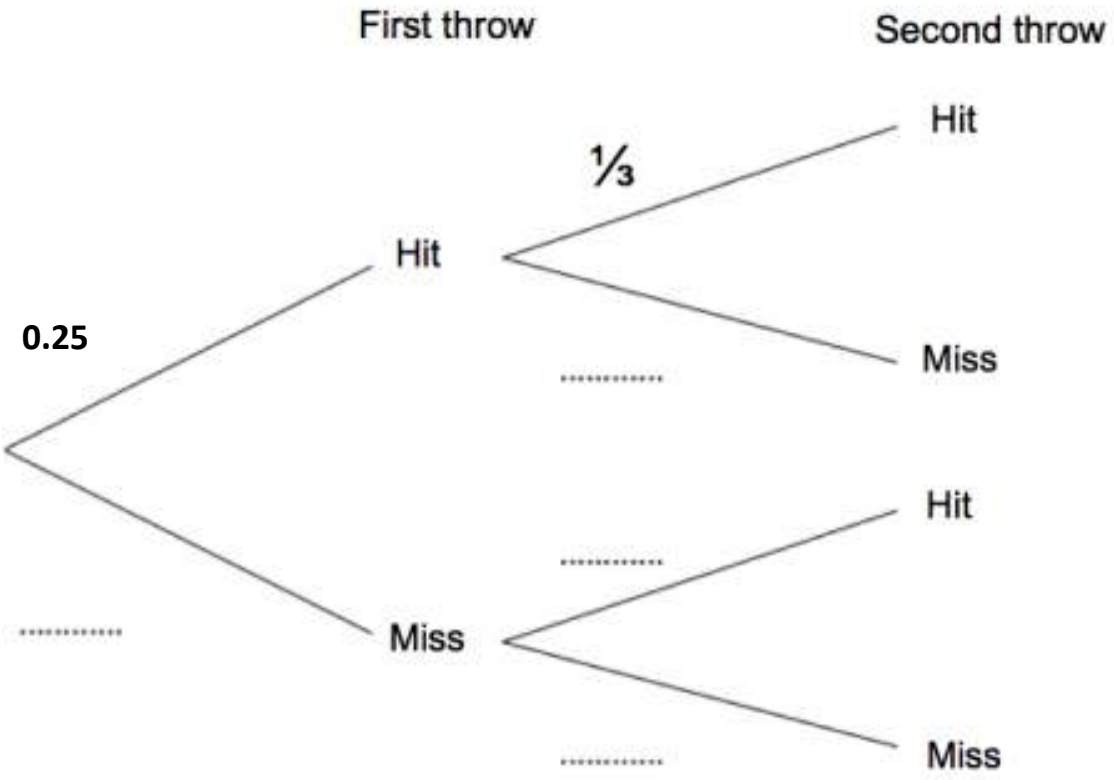
(2)

7. Jennifer is playing darts.
She throws two darts aiming for a Bullseye.

The probability Jennifer hits the Bullseye on her first throw is **0.25**
The probability she hits the Bullseye on her second throw ⅓.

(a) Complete the tree diagram.



[2]

(b) Work out the probability Jennifer hits the Bullseye at least once.

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[3]