



Aberdare Community School  
Mathematics Department

WJEC GCSE  
**Higher – Calculator**  
Data

# Probability

Name: .....

Set: .....

Date: .....

Teacher: .....

7. David says that when throwing two fair dice the probability of scoring a double two is greater than the probability of scoring a double six. Is this true? Justify your answer.

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[2]

1. Jim has one spin of the spinner shown below.

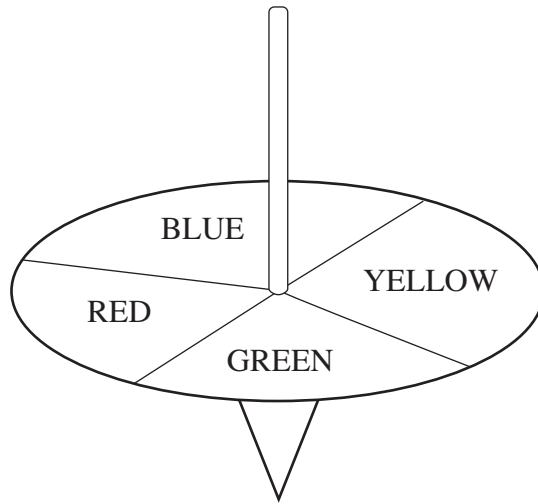


Diagram not drawn to scale.

(a) The table below shows the probabilities of Jim obtaining YELLOW, GREEN, BLUE with one spin of the spinner. Complete the table by inserting the probability that Jim obtains RED with one spin of the spinner.

Colour	YELLOW	GREEN	BLUE	RED
Probability	0.26	0.24	0.37	

.....  
 ..... [2]

(b) In a game, a player chooses two colours on the spinner and wins the game if either of the colours chosen is obtained with one spin of the spinner. Which **two** colours would you choose to have the best chance of winning?

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 ..... [1]

(c) Find the probability of obtaining either GREEN or BLUE on the spinner.

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 .....  
 ..... [2]

4. The table below shows the probabilities of selecting one ball at random from a bag of coloured balls.

Colour	Red	Black	Yellow	White	Purple
Probability	0.25	0.14	0.06	0.15	0.40

- (a) Are there any balls of another colour in the bag? Give a reason for your answer.

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[2]

- (b) What is the probability of selecting

- (i) either a yellow or a purple ball?

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- (ii) a ball of any colour other than white?

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[4]



1. Simon has two fair dice in his pocket, one blue dice and one red dice.

The two dice are thrown and the two outcomes are added together to obtain the total score. The table below shows how all the possible outcomes together with the total scores are recorded.

		Blue dice					
		1	2	3	4	5	6
Red dice	1	2	3			6	7
	2	3	4			7	8
	3	4	5			8	9
	4	5	6			9	10
	5	6	7			10	11
	6	7	8			11	12

- (a) Complete the table above.

[1]

- (b) Write down the probability of throwing

- (i) a 3 on both dice,

..... [1]

- (ii) a 2 on the red dice and a 4 on the blue dice,

..... [1]

- (iii) a total score of 6.

..... [1]

- (c) Which of the total scores are least likely to occur when the two dice are thrown?

..... [2]

- (d) Simon selects one of the dice at random from his pocket.  
What is the probability that it is the red dice?

..... [1]

1. (a) A bag contains 10 beads, of which 2 are red, 3 are blue and 5 are yellow. One bead is selected at random from the bag. Find the probability that the bead is

(i) white,

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 ..... [1]

(ii) either red or yellow.

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 ..... [1]

- (b) A fair dice is thrown. What is the probability that the top face shows a square number?

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 ..... [2]

- (c) There are marbles of 6 different colours in a bag. The table shows the probabilities of selecting the different coloured marbles from the bag.

Colour	Red	Orange	Yellow	Green	Blue	Purple
Probability	0.23	0.12	0.13		0.22	0.21

(i) Complete the entry for Green in the table.

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 ..... [2]

(ii) Which colour of marble is the mode?

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 ..... [1]



2. A fair coin and a fair six-sided dice are thrown together.  
Calculate the probability of obtaining a head and a two.

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[2]

