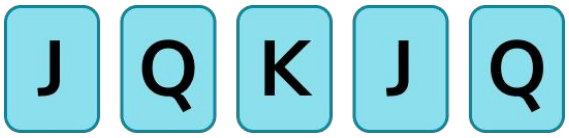
THIRD SPACE LEARNING

GCSE Exam Questions

Mutually Exclusive Events | Probability

GCSE Exam Questions: Mutually Exclusive Events

1) Here are 5 cards



A card is chosen at random.

What is the probability of picking J or a Q?

(2 marks)

2) (a) Adam plays a game with an ordinary, fair dice.

If he rolls a 1, he wins.
If he rolls a 2 or 3 he loses.
If he rolls a 4, 5 or 6 he rolls again.

Work out the probability that Adam wins.

(1)

(b) Work out the probability that Adam loses.

(2)

(3 marks)

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3) **(a)** A spinner has 9 sections. 5 of the sections are red, 2 are blue and the rest are white.

The spinner is spun. Work out the probability that the spinner lands on red.

(1)

(b) Work out the probability that the spinner lands on blue or white.

(2)

(3 marks)

4) **(a)** A bag contains a large number of discs. Each disc has a letter, A, B, C or D.

The table shows the probability of picking each letter.

Colour	A	B	C	D
Probability		0.4	0.3	

A disc is chosen at random.

Work out the probability of choosing a B or a C.

(2)

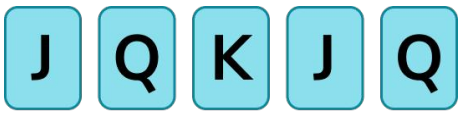
(b) There are twice as many discs with A than discs with D.

Work out the probability of choosing a disc with A.

(3)

(5 marks)

GCSE Exam Questions: Mutually Exclusive Events Answers

	Question	Answer	Marks
1)	Here are 5 cards  A card is chosen at random. What is the probability of picking J or a Q?	$\frac{2}{5} + \frac{2}{5}$ $\frac{4}{5}$	**(1)** **(1)**
2) (a)	Adam plays a game with an ordinary, fair dice. If he rolls a 1, he wins. If he rolls a 2 or 3 he loses. If he rolls a 4, 5 or 6 he rolls again. Work out the probability that Adam wins.	**(a)** $\frac{1}{6}$	**(1)**
(b)	Work out the probability that Adam loses.	**(b)** $\frac{1}{6} + \frac{1}{6}$ $\frac{2}{6}$ **or** $\frac{1}{3}$	**(1)** **(1)**
3) (a)	A spinner has 9 sections. 5 of the sections are red, 2 are blue and the rest are white. The spinner is spun. Work out the probability that the spinner lands on red.	**(a)** $\frac{5}{9}$	**(1)**
(b)	Work out the probability that the spinner lands on blue or white.	**(b)** $\frac{2}{9} + \frac{2}{9}$ $\frac{4}{9}$	**(1)** **(1)**

GCSE Exam Questions: Mutually Exclusive Events Answers

<table>
<tr><th></th><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>4) (a)</td><td>A bag contains a large number of discs.

Each disc has a letter, A, B, C or D.

The table shows the probability of picking each letter.

<table><tr><td>Colour</td><td>A</td><td>B</td><td>C</td><td>D</td></tr><tr><td>Probability</td><td></td><td>0.4</td><td>0.3</td><td></td></tr></table>
A disc is chosen at random.

Work out the probability of choosing a B or a C.</td><td>(a) 0.4 + 0.3

0.7</td><td>(1)

(1)</td></tr>
<tr><td>(b)</td><td>There are twice as many discs with A than discs with D.

Work out the probability of choosing a disc with A.</td><td>(b) 1 - 0.7 = 0.3

$0.3 \div 3 \times 2$

= 0.2</td><td>(1)

(1)

(1)</td></tr>
</table>

Where to go next?

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