Find the probability of an event not happening including using a table (including mutually exclusive and exhaustive)

Maths

Mrs Dennett

Find the probability of an event not happening

1. The probability of Luke winning a race is 0.6

What is the probability that he **does not** win the race?

2. The table shows the probability of randomly selecting different chocolates from a box.
Copy and complete the table.

Mint	Caramel	Hazelnut
0.3	0.6	

3. The probability of throwing a head on a biased coin is $\frac{2}{3}$. What is the probability of throwing a tail?

4. Some pupils are asked to pick their favourite sport. A pupil is equally likely to choose rugby or boxing.
Calculate the missing probabilities.

Tennis	Rugby	Boxing	Other
0.15			0.45

Find the probability of an event not happening

5. Annie has a box of yellow, green and purple crayons.

The table shows the probability of her selecting each crayon from the box.

Yellow	Green	Purple
$\frac{3}{12}$	$\frac{5}{12}$	$\frac{4}{12}$

Work out

a) P(yellow)   b) P(green or purple)

c) P(not purple)   d) P(blue)

6. Maryam has a bag of coloured balls. There are yellow, blue and pink balls.

The probability of her selecting a yellow ball is 0.2

The probability of her selecting a blue ball is equal to selecting a pink ball.

a) Explain why there cannot be 8 balls in the bag.

b) There are 10 yellow balls in the bag. How many pink balls are there?

Answers

Find the probability of an event not happening

1. The probability of Luke winning a race is 0.6

What is the probability that he **does not** win the race? 0.4

2. The table shows the probability of randomly selecting different chocolates from a box.
Copy and complete the table.

Mint	Caramel	Hazelnut
0.3	0.6	0.1

3. The probability of throwing a head on a biased coin is $\frac{2}{3}$. What is the probability of throwing a tail? $\frac{1}{3}$

4. Some pupils are asked to pick their favourite sport. A pupil is equally likely to choose rugby or boxing.
Calculate the missing probabilities.

Tennis	Rugby	Boxing	Other
0.15	0.2	0.2	0.45

Find the probability of an event not happening

5. Annie has a box of yellow, green and purple crayons.

The table shows the probability of her selecting each crayon from the box.

Yellow	Green	Purple
$\frac{3}{12}$	$\frac{5}{12}$	$\frac{4}{12}$

Work out

a)   P(yellow) $\frac{3}{12}$ b) P(green or purple) $\frac{9}{12}$

c) P(not purple) $\frac{8}{12}$ d) P(blue) 0

6. Maryam has a bag of coloured balls. There are yellow, blue and pink balls.

The probability of her selecting a yellow ball is 0.2

The probability of her selecting a blue ball is equal to selecting a pink ball.

a) Explain why there cannot be 8 balls in the bag. Must be a multiple of 5

b) There are 10 yellow balls in the bag. How many pink balls are there? 20