GCSE Maths: Probabilities add up to 1: the probability of “not A” (Foundation): worksheet

GCSE Maths - Probability - Foundation - Lesson 23.2

Name: _____ Date: _____ Score: _____

13 questions. Write your answers in the spaces. Answers and step-by-step help are free at **websink.site/gcse/maths/ch23-probability/foundation/probabilities-add-up-to-1-the-probability-of-not-a/**

Exercise 23B Adding to 1 and the probability of “not” Non-calculator

1 The probability of event A is given. Work out the probability that A does not happen.

(a) $P(A) = \frac{2}{7}$

Answer:

(b) $P(A) = \frac{5}{9}$

Answer:

(c) $P(A) = \frac{3}{10}$

Answer:

(d) $P(A) = \frac{7}{12}$

Answer:

(e) $P(A) = \frac{1}{20}$

Answer:

2 Work out the probability that each event does **not** happen.

(a) P(rain) = 0.7

Answer:

(b) P(win) = 0.45

Answer:

(c) P(late) = 0.08

Answer:

(d) P(pass) = 85%

Answer:

(e) P(sunny) = 62%

Answer:

3 The probability that a train is on time is 0.9. Write down the probability that it is not on time.

Answer:

4 The probability that Mia scores in a penalty is $\frac{4}{5}$. What is the probability that she does not score?

Answer:

5 A biased spinner lands on red, blue, green or yellow. The table shows the probabilities. Work out the probability that it lands on yellow.

Colour	Red	Blue	Green	Yellow
Probability	0.2	0.35	0.15	?

Answer:

6 A bag has red, blue and green counters only. P(red) = $\frac{3}{10}$ and P(blue) = $\frac{1}{5}$. Work out P(green).

Answer:

7 The table shows the probabilities of the scores on a biased die.

Score	1	2	3	4	5	6
Probability	0.1	0.15	0.2	0.2	0.15	?

(a) Work out the probability of scoring 6

Answer:

(b) Work out the probability of scoring an even number

Answer:

(c) Work out the probability of **not** scoring 6

Answer:

8 The probability that a train arrives early is 0.1, the probability that it is on time is 0.6 and the probability that it is late is 0.2. Explain why there must be another possible outcome, and find its probability.

Answer:

9 Ali says: "The probabilities of A, B and C are 0.5, 0.3 and 0.4, and A, B and C are the only possible outcomes." Explain why Ali cannot be correct.

Answer:

10 The probability that Ravi passes a driving test is 0.58. The probability that Aisha passes is 0.72. Work out the probability that...

(a) Ravi does not pass

Answer:

(b) Aisha does not pass

Answer:

11 The spinner has 12 equal sections. Each section is red, blue or green. P(red) = $\frac{1}{3}$ and P(blue) = $\frac{1}{4}$. How many sections are green?

Answer:

12 A bag has red, blue and yellow counters only. P(red) = 0.4 and P(blue) = 0.35. Work out P(yellow), and then P(red or yellow).

(a) P(yellow)

Answer:

(b) P(red or yellow)

Answer:

13 **P(A) = 0.7 and P(B) = 0.5. Explain why A and B cannot be mutually exclusive.**

Answer:

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