Probability of mutually exclusive events

maths-school.co.uk

Name:

---

1) Find the probability that it won't rain, if the probability that it will rain is:

a) 0.4   **0.6**   c) 0.85   **0.15**   e) 0.375   **0.625**   g) 0.108   **0.892**

b) 0.3   **0.7**   d) 0.18   **0.82**   f) 0.472   **0.528**   h) 0.054   **0.946**

---

2) Find the probability that James win will at darts, if the probability he loses is:

a) $\frac{1}{3}$ $\frac{2}{3}$ c) $\frac{5}{13}$ $\frac{8}{13}$ e) $\frac{3}{19}$ $\frac{16}{19}$ g) $\frac{20}{95}$ $\frac{75}{95}$ i) $\frac{24}{80}$ $\frac{56}{80}$

b) $\frac{3}{7}$ $\frac{4}{7}$ d) $\frac{8}{15}$ $\frac{7}{15}$ f) $\frac{28}{42}$ $\frac{14}{42}$ h) $\frac{50}{96}$ $\frac{46}{96}$ j) $\frac{65}{143}$ $\frac{78}{143}$

---

3) Find the missing probabilities in the tables below:

a)

Result	Win	Lose	Draw
Probability	0.3	0.4	**0.3**

b)

Choice	A	B	C
Probability	0.2	0.5	**0.3**

c)

Position	1st	2nd	3rd
Probability	0.25	0.35	**0.4**

d)

Letter	A	E	I	O	U
Probability	0.3	0.2	0.1	0.2	**0.2**

e)

Number	1	2	3	4	5
Probability	0.1	0.3	0.4	0.1	**0.1**

f)

Colour	Bl	Gr	Rd	Pi	Ye
Probability	0.4	0.1	0.1	0.2	**0.2**

g)

Result	Win	Lose	Draw
Probability	0.25	0.18	**0.57**

h)

Result	A	B	C
Probability	**0.15**	0.26	0.59

i)

Result	1st	2nd	3rd
Probability	0.43	**0.28**	0.29

j) Find the value of x in the table:

Colour	Bl	Gr	Rd	Pi
Probability	2x	x	0.4	3x

0.1

---

4) Fill in the table to show the probability of taking each colour.

There are 16 counters in a bag which are either red, white, green, or blue.
- There are four times as many red balls as blue balls
- There are more white balls than red balls
- There are more green balls than white balls
- A ball is taken at random from the bag

Fill in the table to show the **probability** of taking each colour.

Colour	Red	White	Green	Blue
Probability	$\frac{4}{16}$	$\frac{5}{16}$	$\frac{6}{16}$	$\frac{1}{16}$

Exam question:

There are only red, white and blue balls in a box.
There are the same amount of blue balls as white balls.
Complete the table to show the probability
of choosing a ball at random from the box.

Colour	Red	White	Blue
Probability	0.64	**0.16**	**0.16**