

Probability

Revision questions: answers

Writing probabilities as fractions, decimals and percentages

- 1 $\frac{4}{20} = \frac{1}{5}$, 0.2, 20%
2 0.88
3 0.3

Listing outcomes systematically

- 4 SF, SC, MF, MC, PF, PC (6 meals)

- 5 (a)

×	1	2	3
1	1	2	3
2	2	4	6
3	3	6	9
4	4	8	12

(b) $\frac{8}{12} = \frac{2}{3}$

Expected results

- 6 150
7 20

Experimental probability

- 8 (a) $\frac{36}{200} = 0.18$
(b) Yes. A fair dice would give each score about $\frac{1}{6}$ of 200, which is about 33 times, and every frequency is close to 33.

- 9 Kai, because he did more trials. The estimate is $\frac{260}{500} = 0.52$

Frequency trees

- 10 (a) Children 50; adults with no book 25; children with no book 30
(b) $\frac{65}{120} = \frac{13}{24}$

Venn diagrams

- 11 (a) French only 20, both 8, Spanish only 11, neither 11
(b) $\frac{11}{50}$
12 (a) $\frac{1}{15}$ (b) $\frac{9}{15} = \frac{3}{5}$ (c) $\frac{8}{15}$

Conditional probability with Venn diagrams

- 13 (a) $\frac{31}{60}$ (b) $\frac{10}{31}$
14 $\frac{8}{28} = \frac{2}{7}$

Problem solving

- 15 8 counters (3 red and 5 blue)
16 2 sections red, 2 blue and 1 green
17 No. In 6 rolls of a fair dice we would only expect one 6, so getting none is quite likely. Sam needs to roll it many more times.