

Probability - independent events

Name _____ Date _____

1. A drawer contains 6 red socks in a total of 10 socks. What is the probability of selecting a red sock?
2. A box contains 2 blue balls and 9 non-blue balls. What is the probability of selecting a blue ball?
3. A pencil case contains 14 black pens, 5 yellow pens, and 3 blue. What is the probability of selecting a blue pen?



4. A single 6-sided die is rolled. What is the probability of rolling an odd number?

5. A box contains 15 red sweets out of a total of 15 sweets, what is the probability of selecting a red sweet?
6. A tin contains four 50ps, three 10ps and a 20p. What is the probability of selecting a 50p?
7. A single 6-sided die is rolled. What is the probability of rolling a 5 or above?
8. What is the probability of selecting an R from the name MR WORSLEY?

9. A single card is chosen at random from a standard deck of 52 playing cards. What is the probability of choosing:

- a. A red card
- b. A four?

- c. A king?
- d. A club?



10. A single letter is chosen at random from the phrase BRIDGE LEARNING CAMPUS. What is the probability of choosing:

a. An N?

b. A G?

c. A vowel

EXTENSION:

11. Make up four probability questions with the following answers:

- a. $\frac{1}{2}$
- b. 0

- c. 1
- d. $\frac{2}{7}$

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Answers and curriculum mapping

1. A drawer contains 6 red socks in a total of 10 socks, what is the probability of selecting a red sock?
6/10 (3/5)
2. A box contains 2 blue balls and 9 non-blue balls, what is the probability of selecting a blue ball?
2/11
3. A pencil case contains 14 black pens, 5 yellow pens, and 3 blue. What is the probability of selecting a blue pen? **3/22**
4. A single 6-sided dice is rolled. What is the probability of rolling an odd number? **3/6 (1/2)**
5. A box contains 15 red sweets out of a total of 15 sweets, what is the probability of selecting a red sweet? **1 (15/15)**
6. A tin contains four 50ps, three 10ps and a 20p. What is the probability of selecting a 50p? **4/8 (1/2)**
7. A single 6-sided dice is rolled. What is the probability of rolling a 5 or above? **2/6 (1/3)**
8. What is the probability of selecting an R from the name MR WORSLEY ? **2/9**
9. A single card is chosen at random from a deck of 52 cards. What is the probability of choosing:
 - a. A red card? **26/52 (1/2)**
 - b. A four? **4/52 (1/13)**
 - c. A King? **4/52 (1/13)**
 - d. A club? **13/52 (1/4)**
10. A single letter is chosen at random from the phrase BRIDGE LEARNING CAMPUS.
What is the probability of choosing: a. An N? **1/20** b. A G? **2/20 (1/10)** c. A vowel (AEIOU) **7/20**

EXTENSION: Learner's choice – check your questions with your tutor. Examples below.

- a. (1/2) **A 6-sided die is rolled. What is the probability of rolling a number less than 4?**
- b. (0) **A 6-sided die is rolled. What is the probability of rolling an 8?**
- c. (1) **A 6-sided die is rolled. What is the probability of rolling a whole positive number less than 7?**
- d. (2/7) **What is the probability of selecting a vowel from the letters in the word BLISTER ?**

FUNCTIONAL MATHEMATICS Coverage and Range statements (indicative only)

Coverage and range statements provide an indication of the type of mathematical content candidates are expected to apply in functional contexts. Relevant content can also be drawn from equivalent National Curriculum levels and the Adult Numeracy standards. ✓ indicates the main coverage and range skills covered in this resource, although these may vary with the student group and how the resource is used by the teacher.

Reference: Ofqual (2009), *Functional Skills criteria for Mathematics: Entry 1, Entry 2, Entry 3, level 1 and level 2.* <https://www.gov.uk/government/publications/functional-skills-criteria-for-mathematics>

Level 2

- | | |
|---|--|
| a) understand and use positive and negative numbers of any size in practical contexts | g) find area, perimeter and volume of common shapes |
| b) carry out calculations with numbers of any size in practical contexts, to a given number of decimal places | h) use, convert and calculate using metric and, where appropriate, imperial measures |
| c) understand, use and calculate ratio and proportion, including problems involving scale | i) collect and represent discrete and continuous data, using information and communication technology (ICT) where appropriate |
| d) understand and use equivalences between fractions, decimals and percentages ✓ | j) use and interpret statistical measures, tables and diagrams, for discrete and continuous data, using ICT where appropriate. |
| e) understand and use simple formulae and equations involving one or two operations | k) use statistical methods to investigate situations |
| f) recognise and use 2D representations of 3D objects | l) use probability to assess the likelihood of an outcome ✓ |

This resource also covers many **adult numeracy curriculum** elements. <http://www.excellencegateway.org.uk/content/etf1075>