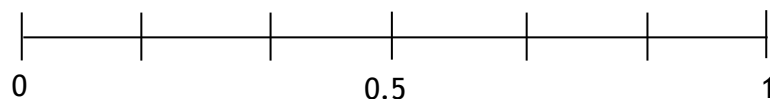


One - Point Questions

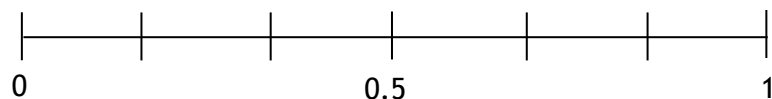
Mark where events (a), (b) & (c) fit on the probability scale.

1.



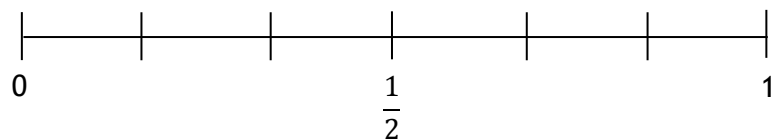
- a The probability of a fair dice landing on an odd score.
- b The chance a 10p coin is selected from a bag of six.
- c The score of a 7 is obtained from a fair dice.

2.



- a The chance that it will snow in July.
- b The probability of throwing a head on a fair coin.
- c The probability of scoring more than 2 on a fair dice.

3.



- a A day in the week has the letter 's' in it.
- b Selecting the letter 'P' in the word MISSISSIPPI.
- c A month in the year with the letter 'r'.

Two - Point Questions

1. An ordinary dice is rolled, what is the probability that it lands on:

- I. 3
- II. 5 or a 6
- III. an odd number
- IV. a number less than 3?

2. Six numbered counters 1, 3, 4, 5, 8 & 9 are placed in a box. If a counter is drawn out at random, what is the probability that it will be a:

- I. 3
- II. 5 or a 9
- III. an odd number
- IV. a number more than 3?

3. A bag consists of 6 green, 4 blue and 3 yellow discs. If a disc is drawn out at random, what is the probability that it will be:

- I. green
- II. purple
- III. green or yellow
- IV. not green?

Three - Point Questions

1. The probability that Jimmy wins is 0.7. What is the probability that he loses?
2. Chloe can pass her test with a probability of $\frac{7}{10}$. What is the probability that she fails?
3. A bag contains red, blue and green discs. The probability that a red disc is withdrawn is 0.25, the probability of a blue is 0.45.

What is the probability of selecting a green?
4. A Year 8 football can win, lose or draw. The probability they win is 0.3, the probability they draw is 0.2. What is the probability that they lose? Are they a good team? Explain.

Four - Point Questions

1.
 - a. Write down all the different ways of combining two colours from the three colours red, green and blue (you can repeat).
 - b. What is probability of selecting the same colour pair?
 - c. What is the probability that the pair is a different colour?
2.
 - a. Write down all possible outcomes of flipping a 2p, a 10p and a 50p coin.
 - b. What is the probability of getting **at least** one head?

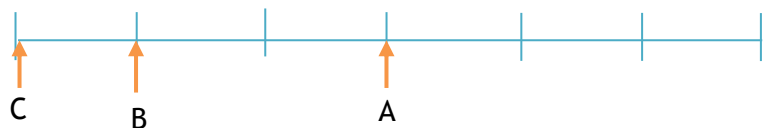
Teacher notes and answers

This resource can be particularly effective when used under timed conditions where pupils have to score as many points as possible, the pupils choosing which questions they want to attempt.

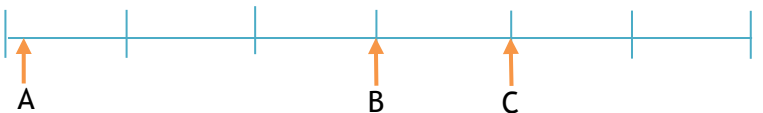
One - Point Questions - [3 + 3 + 3]

1 mark for each correct placement

1.



2.



3.



Two - Point Questions

$$1. \frac{1}{6}, \frac{2}{6} = \frac{1}{3}, \frac{3}{6} = \frac{1}{2}, \frac{2}{6} = \frac{1}{3} \quad 2. \frac{1}{6}, \frac{2}{6} = \frac{1}{3}, \frac{4}{6} = \frac{2}{3}, \frac{4}{6} = \frac{2}{3} \quad 3. \frac{6}{13}, 0, \frac{9}{13}, \frac{7}{13}$$

Three - Point Questions

1. $1 - 0.7 = 0.3$ [1 + 2]

2. $1 - \frac{7}{10} = \frac{3}{10}$ [1 + 2]

3. $0.25 + 0.45 = 0.7$ [1]

$1 - 0.7 = 0.3$ [1 + 1]

4. $0.35 + 0.2 = 0.55$ [1]

$1 - 0.55 = 0.45$ [1]

'Better than not!' [1]
(losing is less than 50%)

Four - Point Questions

1. a. RR, RB, RG, BB, BG, GG [2]

b. $P(\text{same}) = \frac{3}{6} = \frac{1}{2}$ [1]

c. $P(\text{different}) = \frac{3}{6} = \frac{1}{2}$ [1]

2. a. HHH, HHT, HTH, THH, TTH, THT, HTT, TTT. [2]

b. $p(\text{at least 1 head}) = \frac{7}{8}$ [2]

Total = 50