Probability words and the probability scale

Grade 1 | Worked solutions

GCSE Statistics topic practice

1 Choose the best word from **impossible, unlikely, evens, likely, certain** to describe the probability of each event.

a. An ordinary dice numbered 1 to 6 is rolled. It lands on a number less than 7. (1)

b. A fair coin is thrown. It lands on tails. (1)

c. A bag contains 1 red counter and 9 blue counters. A counter is taken at random. It is red. (1)

(3 marks)

a)

1, 2, 3, 4, 5 and 6 are all less than 7

certain

b)

Heads and tails are equally likely

evens

c)

Only 1 of the 10 counters is red

unlikely

a) certain b) evens c) unlikely

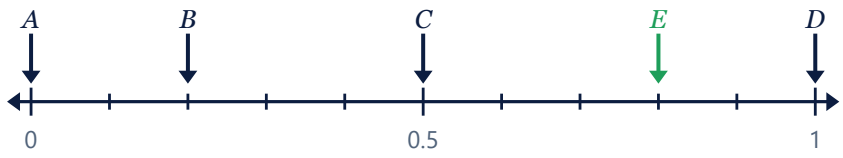
2 The probability scale shows the probabilities of four events, A, B, C and D.

a. Which letter shows the probability that a fair coin lands on heads? (1)

b. Which letter shows the probability of rolling a 7 on an ordinary dice numbered 1 to 6? (1)

c. Choose the best word from **impossible, unlikely, evens, likely, certain** to describe the probability of event B. (1)

d. It is likely to rain in Leeds tomorrow. Mark the probability of this on the scale with an arrow. Label it E. (1)



(4 marks)

a)

Heads and tails are equally likely

Probability is 0.5, so C

b)

There is no 7 on the dice, so it is impossible

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Probability is 0, so A

c)

B is between 0 and 0.5

unlikely

d)

Likely is between 0.5 and 1

E can go anywhere between 0.5 and 1

a) C b) A c) unlikely d) E between 0.5 and 1

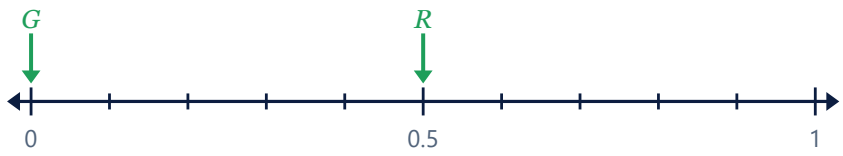
3 A bag contains 10 counters. 5 are red, 4 are blue and 1 is white.
Zofia takes a counter from the bag at random.

a. On the probability scale, mark with an arrow the probability that the counter is red. Label it R. (1)

b. On the probability scale, mark with an arrow the probability that the counter is green. Label it G. (1)

c. Choose the best word from **impossible, unlikely, evens, likely, certain** to describe the probability that the counter is white. (1)

d. Zofia says, "It is likely that the counter is blue because there are lots of blue counters."
Is Zofia correct? Give a reason for your answer. (1)



(4 marks)

a)

5 out of 10 is half of the counters

R goes at 0.5

b)

There are no green counters, so it is impossible

G goes at 0

c)

Only 1 of the 10 counters is white

unlikely

d)

No, Zofia is not correct

4 out of 10 is less than half

so blue is unlikely

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a) R at 0.5 b) G at 0 c) unlikely d) No, blue is unlikely

4 A weather app gives the probability of three kinds of weather in Cardiff tomorrow.
The probabilities are shown on the probability scale.

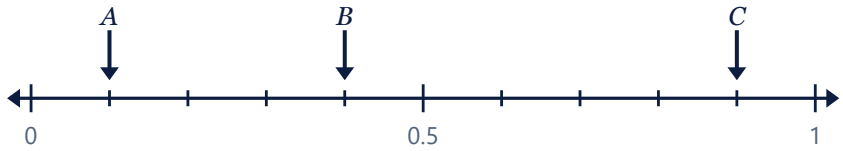
A = snow B = rain C = sunshine

a. Which kind of weather is most likely tomorrow? (1)

b. Choose the best word from **impossible, unlikely, evens, likely, certain** to describe the probability of snow. (1)

c. Write down the probability of rain as a decimal. (1)

d. Is rain more likely or less likely than evens? Give a reason for your answer. (1)



(4 marks)

a) the arrow closest to 1

C, sunshine

b)

A is close to 0 but not at 0

unlikely

c) each small step on the scale is 0.1

B is 4 steps from 0

0.4

d) evens is 0.5

0.4 < 0.5

Rain is less likely than evens

a) sunshine b) unlikely c) 0.4 d) less likely, 0.4 < 0.5

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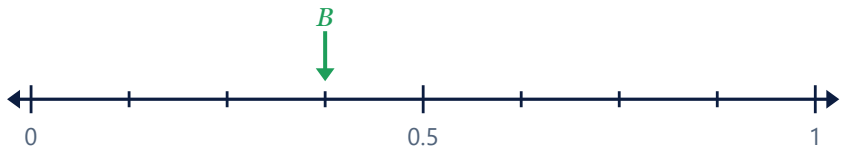
5 A fair spinner has 8 equal sections. 1 section is red, 3 sections are blue and 4 sections are yellow. Ben spins the spinner once.

a. Write down the colour the spinner is least likely to land on. (1)

b. Choose the best word from **impossible, unlikely, evens, likely, certain** to describe the probability that the spinner lands on yellow. (1)

c. The probability scale below is split into 8 equal parts.
Mark with an arrow the probability that the spinner lands on blue. Label it B. (2)

d. Ben says, "If I spin the spinner 8 times, it will land on red exactly once."
Explain why Ben may not be correct. (1)



(5 marks)

a) the colour with the fewest sections

Red

b)

4 out of 8 is half of the sections

evens

c) 3 out of the 8 sections are blue

Each part of the scale is 1 out of 8

B goes 3 marks along from 0

d)

Each spin is random

Red could come up more than once

or not at all

a) red b) evens c) B at the 3rd mark d) spins are random

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