

Name _____

Date _____

Maths vocabulary — answers

40 tasks in five styles, covering every key word in Unit 1.

A · Unscramble the term — Rearrange the letters to make the term that matches the definition.

1 yrpbobaliti

How likely something is, from 0 to 1.

Example: $P(\text{head}) = 1/2$.

Answer: probability

The word is **probability** — How likely something is, from 0 to 1.

2 euoctmo

One possible result.

Example: Rolling a 4.

Answer: outcome

The word is **outcome** — One possible result.

3 tvene

The outcome or outcomes you are interested in.

Example: Rolling an even number.

Answer: event

The word is **event** — The outcome or outcomes you are interested in.

4 nectria

It must happen; probability 1.

Example: Rolling less than 7.

Answer: certain

The word is **certain** — It must happen; probability 1.

5 lrtai

One go of an experiment.

Example: One roll of the dice.

Answer: trial

The word is **trial** — One go of an experiment.

6 oardnm

Chosen so every outcome has an equal chance.

Example: Drawing without looking.

Answer: random

The word is **random** — Chosen so every outcome has an equal chance.

7 aibs

When outcomes are not equally likely.

Example: A weighted spinner.

Answer: bias

The word is **bias** — When outcomes are not equally likely.

8 nocpmelemt

The event not happening.

Example: $P(\text{not } A) = 1 - P(A)$.

Answer: complement

The word is **complement** — The event not happening.

B · Fill in the gaps — Use a word from the box to complete each sentence.

- 9** How likely something is, on a scale from 0 to 1, is its _____.

Word box: □

Answer: probability

$P(\text{head}) = 1/2$.

- 10** One possible result of a trial is an _____.

Word box: □

Answer: outcome

Rolling a 4.

- 11** The outcome or outcomes you are interested in make up an _____.

Word box: □

Answer: event

Rolling an even number.

- 12** Something that can never happen is _____.

Word box: □

Answer: impossible

Its probability is 0.

- 13** Something that must happen is _____.

Word box: □

Answer: certain

Its probability is 1.

- 14** When every outcome has the same chance, they are _____.

Word box: □

Answer: equally likely

The six faces of a fair dice.

- 15** Two events that cannot both happen are _____.

Word box: □

Answer: mutually exclusive

Rolling a 2 and a 5 on one roll.

- 16 Probability multiplied by the number of trials gives the _____.

Word box: □

Answer: expected number

$$1/6 \times 60 = 10.$$

C · Choose the correct ending — Pick the reason that correctly finishes each sentence.

- 17 A probability can never be more than 1 because ...

- ☐ 1 is a big number
- ☐ nothing can be more likely than certain
- ☐ fractions stop at 1

Answer: nothing can be more likely than certain

And never less than 0, because nothing is less likely than impossible.

- 18 The probabilities of all outcomes add to 1 because ...

- ☐ they are fractions
- ☐ one of them must happen
- ☐ 1 is the largest probability

Answer: one of them must happen

That is what makes the complement rule work.

- 19 $P(\text{not } A) = 1 - P(A)$ because ...

- ☐ subtraction is easy
- ☐ either A happens or it does not
- ☐ 1 is certain

Answer: either A happens or it does not

There is no third possibility.

- 20 The equally-likely formula does not apply to a drawing pin because ...

- ☐ pins are small
- ☐ point-up and point-down are not equally likely
- ☐ there are too many outcomes

Answer: point-up and point-down are not equally likely

Its shape favours one. You have to experiment.

- 21 7 heads in 10 tosses does not prove a coin is unfair because ...

- ☐ 7 is close to 5
- ☐ short runs vary a lot by chance
- ☐ coins are always fair

Answer: short runs vary a lot by chance

Judge on hundreds of trials, not ten.

- 22 For mutually exclusive events you add the probabilities because ...

- ☐ addition is simple
- ☐ no outcome is counted twice
- ☐ they are equally likely

Answer: no outcome is counted twice

If they could both happen, adding would double-count.

D · Match the definition — Type the term that matches each definition.

- 23 Which term means: *How likely something is, from 0 to 1.*
Answer: probability
probability — $P(\text{head}) = 1/2$.
- 24 Which term means: *One possible result.*
Answer: outcome
outcome — Rolling a 4.
- 25 Which term means: *The outcome or outcomes you are interested in.*
Answer: event
event — Rolling an even number.
- 26 Which term means: *It can never happen; probability 0.*
Answer: impossible
impossible — Rolling a 7 on a dice.
- 27 Which term means: *It must happen; probability 1.*
Answer: certain
certain — Rolling less than 7.
- 28 Which term means: *Every outcome has the same chance.*
Answer: equally likely
equally likely — The six faces of a fair dice.
- 29 Which term means: *An outcome that counts as the event happening.*
Answer: favourable outcome
favourable outcome — 2, 4 and 6 for “even”.
- 30 Which term means: *The event not happening.*
Answer: complement
complement — $P(\text{not } A) = 1 - P(A)$.
- 31 Which term means: *Two events that cannot both happen.*
Answer: mutually exclusive
mutually exclusive — Rolling a 2 and a 5.
- 32 Which term means: *Successes divided by trials.*
Answer: experimental probability
experimental probability — 8 sixes in 60 rolls.
- 33 Which term means: *What should happen, from the outcomes.*
Answer: theoretical probability
theoretical probability — $1/6$ for a six.
- 34 Which term means: *Probability $\times$ number of trials.*
Answer: expected number
expected number — $1/6 \times 60 = 10$.

E · Reading probability questions — What the instruction words are asking for.

35 A question says “find the probability”. What form should the answer take?

- ☐ A word
- ☐ A fraction, decimal or percentage between 0 and 1
- ☐ A number of times
- ☐ A drawing

Answer: A fraction, decimal or percentage between 0 and 1

Simplest form unless told otherwise.

36 A question says “how many would you expect”. What is wanted?

- ☐ A probability
- ☐ A number of times
- ☐ A percentage
- ☐ A fraction

Answer: A number of times

Probability $\times$ trials.

37 A question says “at random”. What does that guarantee?

- ☐ The answer is a fraction
- ☐ Every outcome has an equal chance
- ☐ There are many outcomes
- ☐ Nothing

Answer: Every outcome has an equal chance

It is what lets you use favourable $\div$ total.

38 A question says “a fair dice”. Why does that word matter?

- ☐ It is polite
- ☐ It means the six outcomes are equally likely
- ☐ It means six sides
- ☐ It does not matter

Answer: It means the six outcomes are equally likely

Without it, the formula would not apply.

39 A question says “comment on whether the spinner is fair”. What should you write about?

- ☐ The colour
- ☐ How the results compare with what was expected, and how many trials there were
- ☐ The shape
- ☐ The time taken

Answer: How the results compare with what was expected, and how many trials there were

Both parts are needed for the mark.

40 What does “with replacement” mean?

- ☐ You get a second go
- ☐ The item is put back, so the total stays the same
- ☐ You replace the bag
- ☐ Nothing

Answer: The item is put back, so the total stays the same

It keeps every draw identical.