

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 cesuqnee

A list of numbers in a definite order.

Example: 3, 7, 11, 15, ...

Answer: sequence

The word is **sequence** — A list of numbers in a definite order.

2 retm

One of the numbers in a sequence.

Example: The 2nd term is 7.

Answer: term

The word is **term** — One of the numbers in a sequence.

3 ailenr

Going up or down by the same amount each time.

Example: 5, 9, 13, 17.

Answer: linear

The word is **linear** — Going up or down by the same amount each time.

4 oopisitn

Where a term sits; $n = 1$ is the first.

Example: $n = 10$ for the 10th.

Answer: position

The word is **position** — Where a term sits; $n = 1$ is the first.

5 oufcnitn

A rule turning each input into one output.

Example: $y = 2x + 1$.

Answer: function

The word is **function** — A rule turning each input into one output.

6 tniup

The number that goes in.

Example: x .

Answer: input

The word is **input** — The number that goes in.

7 uuoptt

The number that comes out.

Example: y .

Answer: output

The word is **output** — The number that comes out.

8 enievsr

The operation that undoes another.

Example: $\div 5$ undoes $\times 5$.

Answer: inverse

The word is **inverse** — The operation that undoes another.

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

- 9** A list of numbers in a definite order is a _____.

Word box: □

Answer: sequence

3, 7, 11, 15.

- 10** Each number in a sequence is a _____.

Word box: □

Answer: term

The 2nd term is 7.

- 11** A sequence with a constant gap is _____.

Word box: □

Answer: linear

5, 9, 13, 17.

- 12** The constant gap in such a sequence is the _____.

Word box: □

Answer: common difference

It is the coefficient of n .

- 13** A rule giving any term from its position is the _____.

Word box: □

Answer: n th term

$4n - 1$.

- 14** A rule turning each input into exactly one output is a _____.

Word box: □

Answer: function

$y = 2x + 1$.

- 15** The operation that undoes another is its _____.

Word box: □

Answer: inverse

$\div 5$ undoes $\times 5$.

- 16** To _____ is to put a number in place of a letter.

Word box: □

Answer: substitute

$n = 3$ in $4n - 1$ gives 11.

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

- 17** A term-to-term rule alone does not fix a sequence because ...

- ☐ it is too short
- ☐ different starting numbers give different sequences
- ☐ it has no letters

Answer: different starting numbers give different sequences

1, 5, 9 and 3, 7, 11 both follow “add 4”.

- 18** The coefficient of n is the common difference because ...

- ☐ it is the biggest number
- ☐ each step of 1 in position adds that much to the term
- ☐ the constant is fixed

Answer: each step of 1 in position adds that much to the term

Going from n to $n + 1$ adds the coefficient once.

- 19** Reaching the 10th term from the 1st takes 9 steps because ...

- ☐ $10 - 1 = 9$
- ☐ the first term needs no step to reach
- ☐ sequences start at 0

Answer: the first term needs no step to reach

You are already there before any step is taken.

- 20** A number giving a fractional n is not in the sequence because ...

- ☐ fractions are not allowed
- ☐ positions must be whole numbers
- ☐ the rule is wrong

Answer: positions must be whole numbers

There is no 24.5th term.

- 21** You undo a two-step machine in reverse order because ...

- ☐ it is quicker
- ☐ the last operation applied must be the first undone
- ☐ the order does not matter

Answer: the last operation applied must be the first undone

Shoes went on last, so they come off first.

- 22** “ $\times 2$ then $+ 1$ ” is written $y = 2x + 1$ rather than $y = 2(x + 1)$ because ...

- ☐ brackets are optional
- ☐ the doubling happens before the adding
- ☐ $2x + 1$ is simpler

Answer: the doubling happens before the adding

Brackets would force the addition first, giving a different function.

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

- 23** Which term means: *A list of numbers in a definite order.*
Answer: sequence
sequence — 3, 7, 11, 15, ...
- 24** Which term means: *One of the numbers in a sequence.*
Answer: term
term — The 2nd term is 7.
- 25** Which term means: *How to get from one term to the next.*
Answer: term-to-term rule
term-to-term rule — “Add 4”.
- 26** Which term means: *The constant gap in a linear sequence.*
Answer: common difference
common difference — 4 in 3, 7, 11.
- 27** Which term means: *One whose gap is always the same.*
Answer: linear sequence
linear sequence — 5, 9, 13, 17.
- 28** Which term means: *A rule giving any term from its position.*
Answer: nth term
nth term — $4n - 1$.
- 29** Which term means: *Where a term sits; $n = 1$ is the first.*
Answer: position
position — $n = 10$ for the 10th.
- 30** Which term means: *The number multiplying a letter.*
Answer: coefficient
coefficient — 4 in $4n - 1$.
- 31** Which term means: *A rule turning each input into one output.*
Answer: function
function — $y = 2x + 1$.
- 32** Which term means: *The number that goes in.*
Answer: input
input — x .
- 33** Which term means: *The operation that undoes another.*
Answer: inverse
inverse — $\div 5$ undoes $\times 5$.
- 34** Which term means: *Arrows from each input to its output.*
Answer: mapping diagram
mapping diagram — $1 \rightarrow 5, 2 \rightarrow 9$.

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

35 A question says “find the n th term”. What form must the answer take?

- ☐ A number
- ☐ An expression in n , such as $4n - 1$
- ☐ A sequence
- ☐ A rule in words

Answer: An expression in n , such as $4n - 1$

“Add 4 each time” answers a different question.

36 A question says “generate the first five terms”. What is wanted?

- ☐ The rule
- ☐ Five numbers
- ☐ The 5th term only
- ☐ A graph

Answer: Five numbers

Write them out in order.

37 A question says “explain why 100 is not a term”. What earns the mark?

- ☐ Saying it is not
- ☐ Showing that n comes out as a fraction
- ☐ Listing terms
- ☐ A drawing

Answer: Showing that n comes out as a fraction

The reasoning is the mark, not the conclusion.

38 A question says “describe the term-to-term rule”. What is wanted?

- ☐ $4n - 1$
- ☐ “Add 4”
- ☐ The first term
- ☐ The 10th term

Answer: “Add 4”

In words, describing the step.

39 What does “substitute $n = 5$ ” mean?

- ☐ Solve for n
- ☐ Replace n by 5 and work it out
- ☐ Add 5
- ☐ Find the 5th rule

Answer: Replace n by 5 and work it out

Then simplify.

40 A question gives a function machine and asks for the input. What must you do?

- ☐ Work forwards
- ☐ Work backwards using inverses in reverse order
- ☐ Guess
- ☐ Add the operations

Answer: Work backwards using inverses in reverse order

Undo the last step first.