

11+ Maths Practice Paper

Year 4 · Foundation

Lesson 5.1: Number patterns and linear sequences

Read this with your child:

1. This paper has **20 questions** in two parts. Work through them in order. The questions get harder as you go.
2. **Part 1** is multiple choice. Choose **one** answer, A, B, C, D or E, and mark it on the separate answer sheet by drawing a firm line through the box next to its letter. If you change your mind, rub the line out completely and mark your new answer.
3. **Part 2** asks you to write your answer. Write it in the boxes on the answer sheet, **one digit in each box**, starting from the left.
4. If a question is hard, leave it and come back to it at the end.
5. You may use rough paper for working out. You may **not** use a calculator.
6. Suggested time: **25 minutes**.

The answer sheet is after the questions. The answers, with a short explanation of each, are at the back for a parent to mark with.

These are original practice questions written by Elite Learners in the style of 11+ entrance tests. They are not produced by, or connected with, GL Assessment or Cambridge University Press & Assessment (CEM).

Example

Here is a sequence: 2, 5, 8, 11, ?

What is the next term?

A 13

B 12

C 17

D 14

E 15

Answer: D Every gap is 3, so the rule is add 3: $11 + 3 = 14$.

The answer, D, has already been marked on your answer sheet.

Now turn over and start Part 1.

Part 1: Multiple choice

1

Here is a sequence: 4, 8, 12, 16, ?

What is the next term?

- A** 21 **B** 20 **C** 18 **D** 24 **E** 17
-

2

Here is a sequence: 30, 27, 24, 21, ?

What is the next term?

- A** 19 **B** 15 **C** 17 **D** 24 **E** 18
-

3

Here is a sequence: 5, 11, 17, 23

What is the rule?

- A** add 7 each time
B add 5 each time
C add 6 each time
D take away 6 each time
E multiply by 2 each time
-

4

Here is a sequence: 7, 12, ?, 22, 27

What is the missing term?

- A** 17 **B** 16 **C** 15 **D** 18 **E** 19
-

5

Here is a sequence: 50, 75, 100, 125, ?

What is the next term?

- A** 150 **B** 130 **C** 200 **D** 175 **E** 135
-

6

Here is a sequence: 64, 56, 48, 40

What is the rule?

- A take away 7 each time
- B add 8 each time
- C take away 6 each time
- D take away 9 each time
- E take away 8 each time

7

The 1st term of a sequence is 6.

The rule is add 9.

What is the 3rd term?

- A 33
- B 18
- C 15
- D 24
- E 27

8

Here is a sequence: ?, 14, 19, 24, 29

What is the first term?

- A 4
- B 8
- C 9
- D 10
- E 19

9

Which sequence goes up in 4s?

- A 4, 8, 16, 32, 64
- B 3, 7, 11, 15, 19
- C 4, 5, 6, 7, 8
- D 3, 6, 9, 12, 15
- E 2, 4, 6, 8, 10

10

Here is a sequence: 1, 2, 4, 8, 16, ?

Each term is double the term before.

What is the next term?

- A 30
- B 32
- C 24
- D 20
- E 18

11

Here is a sequence: 90, 81, ?, 63, 54

What is the missing term?

A 72

B 74

C 70

D 71

E 73

12

Here is a sequence: 3, 5, 7, 9, ...

What is the 10th term?

A 23

B 30

C 19

D 20

E 21

13

Here is a sequence: 5, 10, 15, 20, ...

Which number is NOT in this sequence?

A 35

B 50

C 65

D 72

E 100

14

Count back in 3s: 7, 4, 1, ?

What is the next term?

A 0

B -3

C -2

D -1

E 2

15

Here is a sequence: 10, ?, ?, 25

It adds the same number each time.

What is the first missing term?

A 13

B 17

C 15

D 20

E 12

Part 2: Write your answer

16

Here is a sequence: 13, 22, 31, 40, ?

What is the next term?

Write your answer in the boxes on the answer sheet, one digit in each box.

17

Here is a sequence: 48, 44, ?, 36, 32

What is the missing term?

Write your answer in the boxes on the answer sheet, one digit in each box.

18

The rule of a sequence is add 7.

The 4th term is 30.

What is the 5th term?

Write your answer in the boxes on the answer sheet, one digit in each box.

19

Here is a sequence: 6, 10, 14, 18, ...

What is the 8th term?

Write your answer in the boxes on the answer sheet, one digit in each box.

20

The 1st term of a sequence is 120.

The rule is take away 15.

What is the 4th term?

Write your answer in the boxes on the answer sheet, one digit in each box.

Answer sheet

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Name

Draw a firm line through the box next to your answer, like the example.

Part 1: Multiple choice

Ex	A ☐	B ☐	C ☐	D ☒	E ☐
1	A ☐	B ☐	C ☐	D ☐	E ☐
2	A ☐	B ☐	C ☐	D ☐	E ☐
3	A ☐	B ☐	C ☐	D ☐	E ☐
4	A ☐	B ☐	C ☐	D ☐	E ☐
5	A ☐	B ☐	C ☐	D ☐	E ☐
6	A ☐	B ☐	C ☐	D ☐	E ☐
7	A ☐	B ☐	C ☐	D ☐	E ☐
8	A ☐	B ☐	C ☐	D ☐	E ☐
9	A ☐	B ☐	C ☐	D ☐	E ☐
10	A ☐	B ☐	C ☐	D ☐	E ☐
11	A ☐	B ☐	C ☐	D ☐	E ☐
12	A ☐	B ☐	C ☐	D ☐	E ☐
13	A ☐	B ☐	C ☐	D ☐	E ☐
14	A ☐	B ☐	C ☐	D ☐	E ☐
15	A ☐	B ☐	C ☐	D ☐	E ☐

Part 2: Write your answer, one digit in each box

16		
17		
18		
19		
20		

Answers

For a parent to mark with. One mark for each question: the paper is out of 20. Talk through any your child got wrong, using the explanation.

Q	Answer	How to get it
1	B 20	Every gap is 4, so the rule is add 4: $16 + 4 = 20$.
2	E 18	The terms go down by 3 each time: $21 - 3 = 18$.
3	C add 6 each time	Each gap is 6 ($11 - 5 = 6$) and the terms get bigger, so the rule is add 6.
4	A 17	The rule is add 5, so the missing term is $12 + 5 = 17$. Check: $17 + 5 = 22$.
5	A 150	It counts in 25s: $125 + 25 = 150$.
6	E take away 8 each time	Each gap is 8 ($64 - 56 = 8$) and the terms get smaller, so the rule is take away 8.
7	D 24	The terms are 6, 15, 24. The 3rd term is 24.
8	C 9	The rule is add 5. Going backwards, do the opposite: $14 - 5 = 9$.
9	B 3, 7, 11, 15, 19	3, 7, 11, 15, 19 adds 4 every time. 4, 8, 16, 32, 64 doubles, so its gaps change.
10	B 32	Double 16 is 32.
11	A 72	The rule is take away 9, so the missing term is $81 - 9 = 72$. Check: $72 - 9 = 63$.
12	E 21	Keep adding 2: 3, 5, 7, 9, 11, 13, 15, 17, 19, 21. The 10th term is 21.
13	D 72	The sequence counts in 5s, so every term ends in 5 or 0, but 72 ends in 2.
14	C -2	Take away 3 from 1. Count back past zero: $1 - 3 = -2$.
15	C 15	From 10 to 25 is 3 jumps and 15 altogether, so each jump is $15 \div 3 = 5$. The first missing term is $10 + 5 = 15$.
16	49	The rule is add 9: $40 + 9 = 49$.
17	40	The rule is take away 4: $44 - 4 = 40$.
18	37	Use the rule on the 4th term: $30 + 7 = 37$.
19	34	Keep adding 4: 6, 10, 14, 18, 22, 26, 30, 34. The 8th term is 34.
20	75	The terms are 120, 105, 90, 75. The 4th term is 75.

Score: out of 20