

11+ Maths Practice Paper

Year 4 · Foundation

Lesson 1.7: Special number families

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

Which of these is 3^2 ?

A 6

B 9

C 5

D 32

E 1

Answer: B $3^2 = 3 \times 3 = 9$.

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

Now turn over and start Part 1.

Part 1: Multiple choice

1

What is 4^2 ?

A 16

B 8

C 6

D 12

E 42

2

Which of these is a square number?

A 10

B 15

C 25

D 30

E 12

3

What does 6^2 mean?

A 6×2

B $6 + 6$

C $6 + 2$

D 2×6

E 6×6

4

What is 7^2 ?

A 14

B 42

C 49

D 72

E 56

5

What is the square root of 36?

A 6

B 18

C 9

D 4

E 12

6

Which of these is **not** a square number?

A 1

B 4

C 9

D 16

E 12

7

What is 2^3 ?

A 6

B 9

C 5

D 8

E 4

8

What is the square root of 81?

A 8

B 40

C 9

D 7

E 27

9

What is 10^2 ?

- A 20 B 100 C 1000 D 12 E 110
-

10

A square is made of tiles. It has 5 rows of 5 tiles.

How many tiles are there altogether?

- A 10 B 25 C 20 D 30 E 55
-

11

Which of these is a cube number?

- A 9 B 27 C 16 D 20 E 36
-

12

What is the cube root of 8?

- A 3 B 4 C 6 D 24 E 2
-

13

Sam makes a square using 49 counters.

How many counters are in each row?

- A 6 B 8 C 9 D 7 E 24
-

14

Which two square numbers add up to 25?

- A 9 and 16 B 4 and 21 C 5 and 20 D 1 and 24 E 10 and 15
-

15

The square root of 20 is between which two whole numbers?

- A 2 and 3 B 3 and 4 C 5 and 6 D 4 and 5 E 10 and 11

Part 2: Write your answer

16

What is 9^2 ?

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

17

What is the square root of 100?

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

18

What is 3^3 ?

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

19

A square of tiles has 6 tiles along each side.

How many tiles are there altogether?

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

20

What is the next square number after 49?

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	A 16	$4^2 = 4 \times 4 = 16$.
2	C 25	$25 = 5 \times 5$.
3	E 6×6	6^2 means 6 times itself: 6×6 .
4	C 49	$7^2 = 7 \times 7 = 49$.
5	A 6	$6 \times 6 = 36$, so the square root of 36 is 6.
6	E 12	$1 = 1 \times 1$, $4 = 2 \times 2$, $9 = 3 \times 3$ and $16 = 4 \times 4$. Nothing times itself makes 12.
7	D 8	$2^3 = 2 \times 2 \times 2 = 8$.
8	C 9	$9 \times 9 = 81$.
9	B 100	$10^2 = 10 \times 10 = 100$.
10	B 25	$5 \times 5 = 25$.
11	B 27	$27 = 3 \times 3 \times 3$. 9, 16 and 36 are square numbers.
12	E 2	$2 \times 2 \times 2 = 8$.
13	D 7	$7 \times 7 = 49$, so there are 7 in each row.
14	A 9 and 16	$9 = 3 \times 3$ and $16 = 4 \times 4$, and $9 + 16 = 25$.
15	D 4 and 5	$4^2 = 16$ and $5^2 = 25$. 20 is between them.
16	81	$9^2 = 9 \times 9 = 81$.
17	10	$10 \times 10 = 100$.
18	27	$3 \times 3 = 9$, then $9 \times 3 = 27$.
19	36	$6 \times 6 = 36$.
20	64	$49 = 7^2$, so the next one is $8^2 = 64$.

Score: out of 20