

11+ Maths Practice Paper

Year 4 · Foundation

Lesson 5.4: One-step and two-step linear equations

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 an equation: $n + 4 = 10$

What number does the letter stand for?

A 6

B 14

C 4

D 40

E 5

Answer: A Take away 4 from both sides: $10 - 4 = 6$, so $n = 6$. Check: $6 + 4 = 10$.

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

Now turn over and start Part 1.

Part 1: Multiple choice

1

Here are five pieces of algebra.

Which one is an equation?

A $n + 5$

B $n + 5 = 9$

C $3n$

D $9 - n$

E $4 \times n$

2

Here is an equation: $n + 7 = 12$

What number does the letter stand for?

A 19

B 4

C 6

D 84

E 5

3

Here is an equation: $n - 3 = 8$

What number does the letter stand for?

A 5

B 11

C 24

D 10

E 12

4

Here is an equation: $4n = 20$

What number does the letter stand for?

A 5

B 80

C 16

D 24

E 4

5

Here is an equation: $n + 9 = 15$

What should you do to solve it?

A add 9 to both sides

B multiply both sides by 9

C divide both sides by 9

D take away 9 from both sides

E take away 15 from both sides

6

On a balance scale, a bag of sweets and 6 loose sweets balance 14 loose sweets. Every sweet weighs the same, and the bag holds n sweets, so $n + 6 = 14$.

What number does the letter stand for?

A 20

B 6

C 8

D 9

E 7

7

Here is an equation: $n \div 3 = 5$

What number does the letter stand for?

A 2

B 8

C 53

D 18

E 15

8

Here is an equation: $6n = 42$

Which value makes the equation true?

A $n = 7$

B $n = 6$

C $n = 8$

D $n = 36$

E $n = 48$

9

I think of a number, n . I add 8. The answer is 20.

Which equation is this?

A $n - 8 = 20$

B $n + 8 = 20$

C $8n = 20$

D $n + 20 = 8$

E $n - 20 = 8$

10

Ali has m marbles. He gives away 5 and has 9 left, so $m - 5 = 9$.

What number does the letter stand for?

A 4

B 45

C 13

D 15

E 14

11

Here is an equation: $12 + n = 30$

What number does the letter stand for?

A 42

B 17

C 20

D 18

E 360

12

Here is an equation: $7n = 56$

What should you do to solve it?

- A multiply both sides by 7
 - B take away 7 from both sides
 - C add 7 to both sides
 - D divide both sides by 7
 - E divide both sides by 56
-

13

Here is an equation: $y + 15 = 40$

What number does the letter stand for?

- A 55
 - B 35
 - C 25
 - D 15
 - E 30
-

14

A pack holds p pencils. 5 packs hold 40 pencils, so $5p = 40$.

What number does the letter stand for?

- A 35
 - B 45
 - C 8
 - D 200
 - E 9
-

15

Here is an equation: $2n + 1 = 11$

What number does the letter stand for?

- A 5
- B 6
- C 4
- D 10
- E 12

Part 2: Write your answer

16

Here is an equation: $n - 14 = 27$

What number does the letter stand for?

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

17

Here is an equation: $9n = 81$

What number does the letter stand for?

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

18

Here is an equation: $n \div 5 = 12$

What number does the letter stand for?

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

19

I think of a number. I multiply it by 3. The answer is 36.

What is my number?

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

20

Here is an equation: $3n + 5 = 26$

What number does the letter stand for?

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		19	
17		20	
18			

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 $n + 5 = 9$	An equation has an = sign: $n + 5 = 9$. The others are expressions.
2	E 5	Take away 7 from both sides: $12 - 7 = 5$, so $n = 5$. Check: $5 + 7 = 12$.
3	B 11	Add 3 to both sides: $8 + 3 = 11$, so $n = 11$. Check: $11 - 3 = 8$.
4	A 5	$4n$ means $4 \times n$. Divide both sides by 4: $20 \div 4 = 5$, so $n = 5$. Check: $4 \times 5 = 20$.
5	D take away 9 from both sides	Do the opposite of + 9: take away 9 from both sides. Then $n = 6$.
6	C 8	Take away 6 from both sides: $14 - 6 = 8$. The bag holds 8 sweets. Check: $8 + 6 = 14$.
7	E 15	Multiply both sides by 3: $5 \times 3 = 15$, so $n = 15$. Check: $15 \div 3 = 5$.
8	A $n = 7$	$6 \times 7 = 42$, so $n = 7$.
9	B $n + 8 = 20$	Start with n , add 8, and the answer is 20: $n + 8 = 20$.
10	E 14	Add 5 to both sides: $9 + 5 = 14$. Ali had 14 marbles. Check: $14 - 5 = 9$.
11	D 18	Take away 12 from both sides: $30 - 12 = 18$, so $n = 18$. Check: $12 + 18 = 30$.
12	D divide both sides by 7	$7n$ means $7 \times n$. Do the opposite: divide both sides by 7. Then $n = 8$.
13	C 25	Take away 15 from both sides: $40 - 15 = 25$, so $y = 25$. Check: $25 + 15 = 40$.
14	C 8	Divide both sides by 5: $40 \div 5 = 8$. A pack holds 8 pencils. Check: $5 \times 8 = 40$.
15	A 5	Take away 1 from both sides: $2n = 10$. Then divide both sides by 2: $n = 5$. Check: $2 \times 5 + 1 = 11$.
16	41	Add 14 to both sides: $27 + 14 = 41$, so $n = 41$. Check: $41 - 14 = 27$.
17	9	Divide both sides by 9: $81 \div 9 = 9$, so $n = 9$. Check: $9 \times 9 = 81$.
18	60	Multiply both sides by 5: $12 \times 5 = 60$, so $n = 60$. Check: $60 \div 5 = 12$.
19	12	The equation is $3n = 36$. Divide both sides by 3: $36 \div 3 = 12$. The number is 12.
20	7	Take away 5 from both sides: $3n = 21$. Then divide both sides by 3: $n = 7$. Check: $3 \times 7 + 5 = 26$.

Score: out of 20