

11+ Maths Practice Paper

Year 5 · Intermediate

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

Read this with your child:

1. This paper has **24 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: **30 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: $2n + 3 = 11$

What number does the letter stand for?

A 4

B 7

C 5

D 16

E 3

Answer: A Take away 3 from both sides: $2n = 8$. Then divide both sides by 2: $n = 4$. Check: $2 \times 4 + 3 = 11$.

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

Now turn over and start Part 1.

Part 1: Multiple choice

1

Here is an equation: $n + 18 = 45$

What number does the letter stand for?

- A** 27 **B** 63 **C** 37 **D** 26 **E** 28
-

2

Here is an equation: $6n = 54$

What number does the letter stand for?

- A** 9 **B** 48 **C** 60 **D** 324 **E** 8
-

3

Here is an equation: $4n + 7 = 31$

What is the first step to solve it?

- A** divide both sides by 4
B add 7 to both sides
C multiply both sides by 4
D take away 7 from both sides
E take away 4 from both sides
-

4

Here is an equation: $3n + 2 = 17$

What number does the letter stand for?

- A** 6 **B** 19 **C** 15 **D** 4 **E** 5
-

5

Here is an equation: $n \div 4 = 9$

What number does the letter stand for?

- A** 13 **B** 5 **C** 32 **D** 36 **E** 49
-

6

Here is an equation: $5n - 4 = 26$

What number does the letter stand for?

- A** 5 **B** 6 **C** 22 **D** 30 **E** 7
-

7

I think of a number, n . I multiply it by 4, then take away 3. The answer is 25.

Which equation is this?

- A** $4(n - 3) = 25$
B $3n - 4 = 25$
C $4n - 3 = 25$
D $n - 3 \times 4 = 25$
E $4n + 3 = 25$
-

8

Here is an equation: $7n + 3 = 52$

Which value makes the equation true?

- A** $n = 7$ **B** $n = 5$ **C** $n = 6$ **D** $n = 8$ **E** $n = 9$
-

9

Here is an equation: $2n - 9 = 15$

What number does the letter stand for?

- A** 3 **B** 24 **C** 12 **D** 11 **E** 13
-

10

Here is an equation: $n \div 3 + 4 = 10$

What number does the letter stand for?

- A** 2 **B** 42 **C** 6 **D** 18 **E** 30
-

11

Three cinema tickets cost $\pounds t$ each. The family also spends $\pounds 5$ on popcorn. They spend $\pounds 32$ altogether, so $3t + 5 = 32$.

What number does the letter stand for?

- A** 12 **B** 27 **C** 9 **D** 37 **E** 11

12

Here is an equation: $40 - n = 26$

What number does the letter stand for?

- A** 66 **B** 16 **C** 24 **D** 13 **E** 14
-

13

Look at these equations.

Which equation is solved by the number 6?

- A** $2n + 3 = 16$
B $3n - 2 = 16$
C $4n + 1 = 23$
D $5n - 4 = 24$
E $n \div 2 + 5 = 9$
-

14

Here is an equation: $8n + 11 = 75$

What number does the letter stand for?

- A** 8 **B** 10 **C** 7 **D** 64 **E** 9
-

15

Lily thinks of a number, n . She halves it, then adds 7. The answer is 15.

What number does the letter stand for?

- A** 4 **B** 16 **C** 44 **D** 8 **E** 30
-

16

Here is an equation: $4n - 13 = 35$

What number does the letter stand for?

- A** 8 **B** 22 **C** 48 **D** 13 **E** 12
-

17

Look at these equations.

Which equation has the largest answer?

- A** $n + 20 = 45$ **B** $n \div 2 = 13$ **C** $3n = 72$ **D** $n - 9 = 14$ **E** $2n + 4 = 46$
-

18

A taxi costs £3, plus £2 for each mile. A ride of m miles costs £19, so $2m + 3 = 19$.

What number does the letter stand for?

A 11

B 16

C 8

D 6

E 9

Part 2: Write your answer

19

Here is an equation: $7n - 6 = 50$

What number does the letter stand for?

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

20

Here is an equation: $n \div 6 + 9 = 14$

What number does the letter stand for?

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

21

Here is an equation: $12n + 5 = 101$

What number does the letter stand for?

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

22

I think of a number. I multiply it by 5, then add 12. The answer is 87.

What is my number?

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

23

Here is an equation: $63 - n = 28$

What number does the letter stand for?

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

24

A box holds c crayons. 6 boxes and 4 loose crayons make 76 crayons, so $6c + 4 = 76$.

How many crayons are in each box?

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

Answer sheet

11+ Maths Practice Paper · Year 5 · Lesson 5.4: One-step and two-step linear equations

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 ☐
16	A ☐	B ☐	C ☐	D ☐	E ☐
17	A ☐	B ☐	C ☐	D ☐	E ☐
18	A ☐	B ☐	C ☐	D ☐	E ☐

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

19		22	
20		23	
21		24	

Answers

For a parent to mark with. One mark for each question: the paper is out of 24. Talk through any your child got wrong, using the explanation.

Q	Answer	How to get it
1	A 27	Take away 18 from both sides: $45 - 18 = 27$, so $n = 27$. Check: $27 + 18 = 45$.
2	A 9	Divide both sides by 6: $54 \div 6 = 9$, so $n = 9$. Check: $6 \times 9 = 54$.
3	D take away 7 from both sides	Undo the last step first. The $+ 7$ happened last, so take away 7 from both sides: $4n = 24$. Then divide by 4: $n = 6$.
4	E 5	Take away 2 from both sides: $3n = 15$. Then divide both sides by 3: $n = 5$. Check: $3 \times 5 + 2 = 17$.
5	D 36	Multiply both sides by 4: $9 \times 4 = 36$, so $n = 36$. Check: $36 \div 4 = 9$.
6	B 6	Add 4 to both sides: $5n = 30$. Then divide both sides by 5: $n = 6$. Check: $5 \times 6 - 4 = 26$.
7	C $4n - 3 = 25$	Multiply first, then take away: $4n - 3 = 25$.
8	A $n = 7$	Try it: $7 \times 7 + 3 = 49 + 3 = 52$, so $n = 7$.
9	C 12	Add 9 to both sides: $2n = 24$. Then divide both sides by 2: $n = 12$. Check: $2 \times 12 - 9 = 15$.
10	D 18	Take away 4 from both sides: $n \div 3 = 6$. Then multiply both sides by 3: $n = 18$. Check: $18 \div 3 + 4 = 10$.
11	C 9	Take away 5 from both sides: $3t = 27$. Then divide both sides by 3: $t = 9$. One ticket costs £9.
12	E 14	What do you take away from 40 to leave 26? $40 - 26 = 14$, so $n = 14$. Check: $40 - 14 = 26$.
13	B $3n - 2 = 16$	Put 6 in: $3 \times 6 - 2 = 18 - 2 = 16$. Each of the others gives a different number on the left.
14	A 8	Take away 11 from both sides: $8n = 64$. Then divide both sides by 8: $n = 8$. Check: $8 \times 8 + 11 = 75$.
15	B 16	The equation is $n \div 2 + 7 = 15$. Take away 7: $n \div 2 = 8$. Multiply by 2: $n = 16$. Lily's number is 16.
16	E 12	Add 13 to both sides: $4n = 48$. Then divide both sides by 4: $n = 12$. Check: $4 \times 12 - 13 = 35$.
17	B $n \div 2 = 13$	The answers are 25, 24, 23, 21 and 26. The largest is 26, from $n \div 2 = 13$.
18	C 8	Take away 3 from both sides: $2m = 16$. Then divide both sides by 2: $m = 8$. The ride is 8 miles.
19	8	Add 6 to both sides: $7n = 56$. Then divide both sides by 7: $n = 8$. Check: $7 \times 8 - 6 = 50$.
20	30	Take away 9 from both sides: $n \div 6 = 5$. Then multiply both sides by 6: $n = 30$. Check: $30 \div 6 + 9 = 14$.

Q	Answer	How to get it
21	8	Take away 5 from both sides: $12n = 96$. Then divide both sides by 12: $n = 8$. Check: $12 \times 8 + 5 = 101$.
22	15	The equation is $5n + 12 = 87$. Take away 12: $5n = 75$. Divide by 5: $n = 15$. The number is 15.
23	35	What do you take away from 63 to leave 28? $63 - 28 = 35$, so $n = 35$. Check: $63 - 35 = 28$.
24	12	Take away 4 from both sides: $6c = 72$. Then divide both sides by 6: $c = 12$. Each box holds 12 crayons.

Score: out of 24