



CLASS 7 MATHS · 2026-27

Simple equations

Simple equations

33

QUESTIONS

25

MINUTES

3

EXERCISES

This belongs to _____

Date _____

WHAT YOU'LL GET GOOD AT

- Solves one-step and two-step equations by doing the same thing to both sides
- Handles a variable on both sides without guessing
- Expands a bracket correctly before solving
- Turns a sentence into an equation and solves it
- Checks an answer by substituting it back

Take your time, and have a go at every one. If you get stuck, look at the orange box — Ollie has already done one for you.

Simple equations

Simple equations · 33 questions · tick each box as you finish

Exercise 1 of 3 · 12 questions Solve. Show the step you did to both sides.



WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

$2x + 3 = 11$. Subtract 3 from both sides: $2x = 8$. Divide both sides by 2: $x = 4$. Write the step you did each time, even when the answer is obvious. The whole point of the easy questions is to practise the method while it is not needed, because in three weeks it will be.

1) $x + 7 = 12$

2) $y - 4 = 9$

3) $3a = 21$

4) $m \div 5 = 6$

5) $2x + 3 = 11$

6) $5p - 7 = 18$

7) $4n + 9 = 1$

8) $x \div 3 + 2 = 5$

9) $6x + 5 = 41$

10) $y - 13 = 8$

11) $7a = 91$

12) $m \div 4 = 9$

Exercise 2 of 3 · 11 questions Solve. The variable is on both sides, or there is a bracket. ☐

WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

$3x + 4 = x + 10$. Take x from both sides to leave $2x + 4 = 10$, then subtract 4 to get $2x = 6$, then divide by 2 to get $x = 3$. Check by substituting: $3(3) + 4 = 13$ and $3 + 10 = 13$, so it works. Substituting back takes ten seconds and catches nearly every arithmetic slip - it is the cheapest habit in Class 7 maths.

1) $3x + 4 = x + 10$

2) $5y - 3 = 2y + 9$

3) $2(x + 3) = 14$

4) $4(m - 2) = 3m + 1$

5) $7 - 2x = 1$

6) $3x - 8 = 13$

7) $9p + 4 = -14$

8) $2(x - 5) = 18$

9) $5y + 2 = 3y + 14$

10) $4m - 7 = m + 11$

11) $10 - 3x = 1$

Exercise 3 of 3 · 10 questions Form an equation, then solve it.

WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

'Three times a number added to 5 gives 26.' Let the number be n . Three times it is $3n$, adding 5 gives $3n + 5$, and that equals 26. Solving gives $n = 7$. The hardest line is the first one, and it is worth writing 'let n be the number' every single time - naming the unknown is what makes the rest of the sentence translatable.

1) Three times a number, added to 5, gives 26. Find the number.

2) The sum of two consecutive whole numbers is 45. Find them.

3) A father is 4 times as old as his son. Their ages add up to 50. Find both ages.

4) The length of a rectangle is 3 cm more than its breadth, and the perimeter is 26 cm. Find the length and breadth.

5) One-fifth of a number, minus 4, is 6. Find the number.

6) Four times a number, less 7, gives 29. Find the number.

7) The sum of three consecutive whole numbers is 51. Find them.

8) A mother is 3 times as old as her daughter, and their ages add up to 48. Find both ages.

9) The breadth of a rectangle is 4 cm less than its length, and the perimeter is 36 cm. Find both.

10) A number is doubled and 9 is added, giving 25. Find the number.

**All done? How did that feel?**

Colour in a star. Three stars means you could teach it to someone else.



Tricky · Getting there · Easy now



Answer key

For grown-ups

Simple equations · keep this page back until your child has finished.

1. Solve. Show the step you did to both sides.

- 1) $x = 5$. Subtract 7 from both sides.
- 2) $y = 13$. Add 4 to both sides.
- 3) $a = 7$. Divide both sides by 3.
- 4) $m = 30$. Multiply both sides by 5.
- 5) $x = 4$. Subtract 3 from both sides to get $2x = 8$, then divide by 2.
- 6) $p = 5$. Add 7 to both sides to get $5p = 25$, then divide by 5.
- 7) $n = -2$. Subtract 9 from both sides to get $4n = -8$, then divide by 4.
- 8) $x = 9$. Subtract 2 to get $x \div 3 = 3$, then multiply both sides by 3.
- 9) $x = 6$. Subtract 5 from both sides to get $6x = 36$, then divide by 6.
- 10) $y = 21$. Add 13 to both sides.
- 11) $a = 13$. Divide both sides by 7.
- 12) $m = 36$. Multiply both sides by 4.

2. Solve. The variable is on both sides, or there is a bracket.

- 1) $x = 3$. Subtract x from both sides: $2x + 4 = 10$. Subtract 4: $2x = 6$. Divide by 2.
- 2) $y = 4$. Subtract $2y$: $3y - 3 = 9$. Add 3: $3y = 12$. Divide by 3.
- 3) $x = 4$. Divide both sides by 2: $x + 3 = 7$. Subtract 3. (Expanding to $2x + 6 = 14$ works equally well.)
- 4) $m = 9$. Expand: $4m - 8 = 3m + 1$. Subtract $3m$: $m - 8 = 1$. Add 8.
- 5) $x = 3$. Subtract 7: $-2x = -6$. Divide both sides by -2.
- 6) $x = 7$. Add 8 to both sides: $3x = 21$. Divide by 3.
- 7) $p = -2$. Subtract 4: $9p = -18$. Divide by 9.
- 8) $x = 14$. Divide both sides by 2: $x - 5 = 9$. Add 5.
- 9) $y = 6$. Subtract $3y$: $2y + 2 = 14$. Subtract 2: $2y = 12$. Divide by 2.
- 10) $m = 6$. Subtract m : $3m - 7 = 11$. Add 7: $3m = 18$. Divide by 3.
- 11) $x = 3$. Subtract 10: $-3x = -9$. Divide both sides by -3.

3. Form an equation, then solve it.

- 1) $3n + 5 = 26$, so $3n = 21$ and $n = 7$.
- 2) $n + (n + 1) = 45$, so $2n + 1 = 45$, $2n = 44$ and $n = 22$. The numbers are 22 and 23.
- 3) $s + 4s = 50$, so $5s = 50$ and $s = 10$. The son is 10 and the father is 40.
- 4) $2(b + b + 3) = 26$, so $4b + 6 = 26$, $4b = 20$ and $b = 5$. The breadth is 5 cm and the length is 8 cm.
- 5) $n \div 5 - 4 = 6$, so $n \div 5 = 10$ and $n = 50$.
- 6) $4n - 7 = 29$, so $4n = 36$ and $n = 9$.
- 7) $n + (n + 1) + (n + 2) = 51$, so $3n + 3 = 51$, $3n = 48$ and $n = 16$. The numbers are 16, 17 and 18.
- 8) $d + 3d = 48$, so $4d = 48$ and $d = 12$. The daughter is 12 and the mother is 36.
- 9) $2(l + l - 4) = 36$, so $4l - 8 = 36$, $4l = 44$ and $l = 11$. The length is 11 cm and the breadth is 7 cm.
- 10) $2n + 9 = 25$, so $2n = 16$ and $n = 8$.

WHILE YOUR CHILD WORKS

- Ask 'what did you do to both sides?' rather than 'what is the answer?'. A child who cannot say it is guessing, and guessing stops working within a term.
- Substituting the answer back is the check. Ten seconds, and it catches nearly every slip.
- In word problems, insist on 'let n be...' as the first line. Most of the difficulty is naming the unknown, not the algebra.

**Spotted a gap while marking?**

A free assessment is one live class with a matched teacher - no card, nothing to cancel. Afterwards you get an honest note on what they noticed.

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