

Boost Free Lessons - Year 7 Maths

Lesson 14: One Step Equations (add and subtract)

Name: _____ Grade: _____ Date: _____

Worked Example 1

Solve $x + 9 = 17$

1. 9 has been added to x , so do the opposite operation and subtract 9.
2. Whatever you do to one side of the equation you must also do to the other side.
3. $x + 9 - 9 = 17 - 9$
4. Check by substituting back: $8 + 9 = 17$ (correct)

$x = 8$

Worked Example 2

Solve $m - 12 = 5$

1. 12 has been subtracted from m , so add 12 to both sides.
2. $m - 12 + 12 = 5 + 12$
3. Check by substituting back: $17 - 12 = 5$ (correct)

$m = 17$

Remember: Always do the **opposite** operation, and always do it to **both** sides. Substitute your answer back in to check it.



Question 1: Solve the following equations.

1. $x + 4 = 11$

2. $y - 6 = 9$

3. $a + 15 = 22$

4. $k - 3 = 12$

5. $n + 8 = 8$

6. $p - 20 = 5$

7. $t + 13 = 30$

8. $c - 9 = -4$

9. $d + 25 = 40$

10. $w - 11 = 0$



Question 2: Solve the following equations.

1. $x + 7 = 2$

2. $m - 5 = -8$

3. $h + 14 = 6$

4. $23 = y + 9$

5. $40 = b - 12$

6. $g + 3.5 = 10$

7. $v - 2.5 = 7.5$

8. $z + 100 = 64$



Question 3: Answer the following questions.

1. Ella had some stickers. She was given 12 more and now has 31. Write an equation and solve it to find how many she started with.
2. After spending \$18, Jack has \$27 left. Write an equation and find how much he started with.
3. The temperature rose by 9°C to reach 4°C . Write an equation and find the starting temperature.
4. A number decreased by 16 equals 24. Write an equation and find the number.
5. A box held p pencils. 7 were taken out and 5 were put in, leaving 23. Write an equation and find p .





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Answers : One Step Equations (add and subtract)

Question 1

1. $x = 7$

2. $y = 15$

3. $a = 7$

4. $k = 15$

5. $n = 0$

6. $p = 25$

7. $t = 17$

8. $c = 5$

9. $d = 15$

10. $w = 11$

Question 2

1. $x = -5$

2. $m = -3$

3. $h = -8$

4. $y = 14$

5. $b = 52$

6. $g = 6.5$

7. $v = 10$

8. $z = -36$

Question 3

1. $s + 12 = 31$, so $s = 19$ stickers

2. $j - 18 = 27$, so $j = \$45$

3. $t + 9 = 4$, so $t = -5^{\circ}\text{C}$

4. $n - 16 = 24$, so $n = 40$

5. $p - 7 + 5 = 23$, so $p = 25$ pencils

