

Solving Two-Step Equations

Name: _____ Date: _____ Score: _____ / 18

Quick Review and Helpful Hints

A *two-step equation* takes two inverse operations to solve. First undo the addition or subtraction (move the constant), then undo the multiplication or division (free the variable). Always do the same thing to both sides.

▷ **Example:** Solve $2x + 3 = 11$. **Work:** Subtract 3 from both sides:
 $2x = 8$. Divide both sides by 2: $x = 4$. ★ **Answer:** $x = 4$



Undo +3, then undo $\times 2$.

◆ **Practice Problems**

Solve each equation.

- | | |
|--|---|
| <p>1. $2x + 3 = 11$ _____</p> <p>2. $3x - 5 = 16$ _____</p> <p>3. $4x + 1 = 13$ _____</p> <p>4. $5x - 2 = 18$ _____</p> <p>5. $\frac{x}{2} + 1 = 5$ _____</p> <p>6. $\frac{x}{3} - 2 = 1$ _____</p> <p>7. $6x + 4 = 22$ _____</p> | <p>8. $2x - 7 = -1$ _____</p> <p>9. $3x + 9 = 0$ _____</p> <p>10. $7x - 3 = 18$ _____</p> <p>11. $\frac{x}{4} + 3 = 5$ _____</p> <p>12. $10 - 2x = 4$ _____</p> <p>13. $-3x + 5 = 14$ _____</p> <p>14. $8x + 5 = 29$ _____</p> |
|--|---|

◆ **Word Problems**

15. A taxi charges \$2 plus \$3 per mile. A ride costs \$14. How many miles was it? _____
16. You start with \$5 and add \$4 each week. After how many weeks do you have \$25? _____
17. Three more than four times a number is 19. Find the number. _____
18. A gym costs \$20 to join plus \$10 per month. The total is \$60. How many months? _____



Answer Keys

1. $x = 4$

2. $x = 7$

3. $x = 3$

4. $x = 4$

5. $x = 8$

6. $x = 9$

7. $x = 3$

8. $x = 3$

9. $x = -3$

10. $x = 3$

11. $x = 8$

12. $x = 3$

13. $x = -3$

14. $x = 3$

15. 4 miles

16. 5 weeks

17. 4

18. 4 months

Step-by-Step Explanations

1. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 3: $2x = 8$. Divide by 2: $x = 4$. So the final answer is $x = 4$.

2. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Add 5: $3x = 21$. Divide by 3: $x = 7$. So the final answer is $x = 7$.

3. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 1: $4x = 12$. Divide by 4: $x = 3$. So the final answer is $x = 3$.

4. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Add 2: $5x = 20$. Divide by 5: $x = 4$. So the final answer is $x = 4$.

5. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 1: $\frac{x}{2} = 4$. Multiply by 2: $x = 8$. So the final answer is $x = 8$.

6. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Add 2: $\frac{x}{3} = 3$. Multiply by 3: $x = 9$. So the final answer is $x = 9$.

7. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 4: $6x = 18$. Divide by 6: $x = 3$. So the final answer is $x = 3$.

8. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Add 7: $2x = 6$. Divide by 2: $x = 3$. So the final answer is $x = 3$.

9. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 9: $3x = -9$. Divide by 3: $x = -3$. So the final answer is $x = -3$.

10. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Add 3: $7x = 21$. Divide by 7: $x = 3$. So the final answer is $x = 3$.

11. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 3: $\frac{x}{4} = 2$. Multiply by 4: $x = 8$. So the final answer is $x = 8$.

12. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 10: $-2x = -6$. Divide by -2 : $x = 3$. So the final answer is $x = 3$.

13. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 5: $-3x = 9$. Divide by -3 : $x = -3$. So the final answer is $x = -3$.

14. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Subtract 5: $8x = 24$. Divide by 8: $x = 3$. So the final answer is $x = 3$.

15. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Set up $3m + 2 = 14$. Subtract 2: $3m = 12$, so $m = 4$ miles. So the final answer is 4 miles.

16. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Set up $4w + 5 = 25$. Subtract 5: $4w = 20$, so $w = 5$ weeks. So the final answer is 5 weeks.

17. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Set up $4x + 3 = 19$. Subtract 3: $4x = 16$, so $x = 4$. So the final answer is 4.

18. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is Set up $10m + 20 = 60$. Subtract 20: $10m = 40$, so $m = 4$ months. So the final answer is 4 months.



Keep Building CBEST Math Skills

Recommended Effortless Math resources



CBEST Math Test Prep Bundle

Use the complete CBEST Math resource for review, worked examples, extra practice, and test-style questions after each worksheet.



Scan Me
Download Instantly

STUDENT FAVORITE - CBEST Math for Beginners



CBEST Math for Beginners 2026

Step-by-step lessons, topic practice, and full review support for students who want a calm path through CBEST Math preparation.

A strong companion for self-study, tutoring, homework, and targeted review.

PDF Edition



Scan Me
Download Instantly

For more CBEST Math prep, visit EffortlessMath.com/CBEST