

Solve each equation. Check your solution. (Example 1)

1. $a - 5 = 9$ **14**

2. $b - 3 = 7$ **10**

3. $4 = y - 8$ **12**



4. Catherine studied 1.25 hours for her science test. This was 0.5 hour less than she studied for her algebra test. Write and solve a subtraction equation to find how long she studied for her algebra test. (Examples 2 and 3)

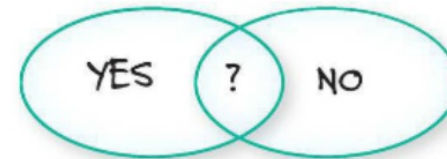
$a - 0.5 = 1.25$; 1.75 hours

5.  **Building on the Essential Question** How can the Addition Property of Equality be used to solve subtraction equations?

Sample answer: It allows you to add the same number to each side of the equation.

Rate Yourself!

Are you ready to move on?
Shade the section that applies.



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Independent Practice

Go online for Step-by-Step Solutions

Solve each equation. Check your solution. (Examples 1 and 3)

1. $c - 1 = 8$ **9**



2. $t - 7 = 2$ **9**

3 $1 = g - 3$ **4**

4. $a - 2.1 = 5.8$ **7.9**

5. $a - 1.1 = 2.3$ **3.4**

6. $4.6 = e - 3.2$ **7.8**

7. Pete is 15 years old. This is 6 years younger than his sister Victoria. Write and

8. A CD costs \$14.95. This is \$7.55 less than the cost of a DVD. Write and solve a subtraction equation to find the cost of the DVD. (Example 3)

$$d - 7.55 = 14.95; \$22.50$$

9. If $b - 10 = 5$, what is the value of $b + 6$? 21

Solve each equation. Check your solution.

10. $m - \frac{1}{3} = \frac{2}{3}$ **1**

11. $n - \frac{1}{4} = \frac{3}{4}$ **1**

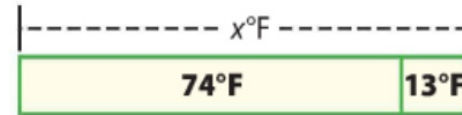
12. $s - \frac{1}{3} = \frac{7}{9}$ **$\frac{10}{9}$ or $1\frac{1}{9}$**

- 13** Alejandra spent her birthday money on a video game that cost \$24, a controller for \$13, and a memory card for \$16. The total tax was \$3. Write and solve a subtraction equation to find how much money Alejandra gave the cashier if she received \$4 in change.

$$x - 56 = 4; \$60$$



14. **CCSS Multiple Representations** The bar diagram represents a subtraction equation. **14a–c. Sample answers given.**




- a. **Words** Write a real-world problem that can be represented by the bar diagram. The high temperature yesterday was 74°F, which was 13°F less than the high temperature today. What was the high temperature today?
- b. **Algebra** Write a subtraction equation that can be represented by the bar diagram. $x - 13 = 74$
- c. **Numbers** Solve the equation you wrote in part b. 87°F


H.O.T. Problems Higher Order Thinking


15. **CCSS Find the Error** Elisa is explaining how to solve the equation $d - 6 = 4$. Find her mistake and correct it. Elisa did not perform the inverse operation. Add 6 to each side to undo subtracting 6.

Subtract 6 from each side.



16.  **Model with Mathematics** Write a real-world problem that could be represented by $d - 32 = 64$. Sample answer: I have d dollars. After paying my sister \$32, I have \$64 left. How much money did I have to start with?

17.  **Persevere with Problems** Another type of subtraction equation is $16 - b = 7$. Explain how you would solve this equation then solve it. Sample answer: I would use what I know about fact families to rewrite the equation $b + 7 = 16$. The solution is 9.

18.  **Reason Inductively** Which of the following is true concerning $x - 5 = 13$? I

- I To find the value of x , add 5 to each side.
- II To find the value of x , subtract 5 from each side.
- III To find the value of x , add 13 to each side.
- IV To find the value of x , subtract 13 from each side.

