

Solve One-Step Addition and Subtraction Equations

Lesson 7-2

Name: _____ **Date:** _____ **Class:** _____

Key Vocabulary Level 2 Standard

Picture first, then the word, then a plain-language meaning. Say each word out loud.

$$x + 2 = 7$$

balanced with =

$x + 5 = 12$ — both sides equal 12 when $x = 7$

Equation

Write the definition:

$$x + 2 = 7$$

balanced with =

Addition undoes subtraction: if $x - 3 = 10$, add 3 to get $x = 13$

Inverse operation

Write the definition:

$$x + 2 = 7$$

balanced with =

$x + 5 = 12 \rightarrow$ subtract 5 from both sides $\rightarrow x = 7$ (x is isolated)

Isolate

Write the definition:

$$x + 2 = 7$$

balanced with =

$x = 7$ is the solution to $x + 5 = 12$ because $7 + 5 = 12$ ✓

Solution

Write the definition:



number

$x + 4 = 9$ is solved in one step: subtract 4 from both sides, so $x = 5$.

One-step equation

Write the definition:



number

If you subtract 4 from the left side, you must subtract 4 from the right to keep balance.

Balance

Write the definition:

Guided Notes Level 2 Standard



WHAT WE'RE LEARNING TODAY

I can solve one-step addition and subtraction equations using inverse operations.

Fill in each blank as we go. Use the Word Bank to help you.



WORD BANK — FILL EACH BLANK WITH THE BEST WORD

Equation

Inverse operation

Isolate

Solution

One-step equation

Balance

Tap any word to see what it means and a picture.

1 A math sentence with an equal sign showing two equal amounts is an

2 An operation that undoes another, like subtraction undoing addition, is an

3 To get the variable alone on one side of the equation is to

it.

4 The value of the variable that makes the equation true is the


5 An equation solved in a single step is a .

6 Doing the same thing to both sides to keep them equal keeps the equation in

.

Watch & Try — Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

 **I do – watch**

Follow each step as your teacher solves it.


Problem: Solve: $x + 9 = 15$

- A. $x = 6$
- B. $x = 24$
- C. $x = 9$
- D. $x = 15$

Step 1 Subtract 9 from both sides: $x = 15 - 9 = 6$.

Step 2 Check: $6 + 9 = 15$ ✓


✓ **Answer:** A. $x = 6$

 **Try – put the steps in order**

Drag the cards (or use the ▲ ▼ buttons) to put the solution steps in the right order, then press **Check**.

Check: $6 + 9 = 15$ ✓

Subtract 9 from both sides: $x = 15 - 9 = 6$.

 **We do – together**

Solve this one with your class using the same steps.

Problem: Solve: $y - 7 = 20$

- A. $y = 27$
- B. $y = 13$
- C. $y = 7$
- D. $y = 140$

Step 1 _____

Step 2 _____

Answer: _____

 **You do — your turn**

Now try one on your own. Show every step.

Problem: Solve: $n + 15 = 42$

A. $n = 27$

B. $n = 57$

C. $n = 15$

D. $n = 42$

Show your work:

Try It

Solve on your own. Check the answer key when you are done.

1. Unlock Card 2: Solve $n - 4 = 9$.

- A. $n = 13$
- B. $n = 5$
- C. $n = 36$
- D. $n = -5$

Show your work:

2. Unlock Card 3: A vault held some clue tokens. After the detective added 16 tokens, there were 50. The equation is $t + 16 = 50$. How many tokens were there before?

- A. 34
- B. 66
- C. 16
- D. 800

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A detective solved $x + 25 = 60$ and got $x = 35$. Another detective solved $y - 25 = 60$ and got $y = 35$. Are both correct? Explain using inverse operations and check each answer.

Sentence starter: For $x + 25 = 60$, the inverse operation is ____, so $x =$ ____. Check: _____. For $y - 25 = 60$, the inverse operation is ____, so $y =$ ____. Check: _____. Therefore, ____.

Show your work:

Reflect — Exit Ticket

Solve: $p + 2.8 = 9.1$

- A. $p = 6.3$
- B. $p = 11.9$
- C. $p = 6.8$
- D. $p = 3.25$

Your answer:
