

Write Equations Flagship

Lesson 7-1-flagship

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

COLD CASE MISSION

| The Equation Vault

You are Detective Ruiz's new code analyst. A tip just came in: 'A number of stolen gems plus 8 more equals 20 total.' The evidence vault only opens when the clue is translated into a correct equation. Master writing equations and the case cracks wide open.

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 =

$x + 5 = 12$ means 'some number plus 5 equals 12'

Equation

Write the definition:

x

stands for a number

In $n + 3 = 10$, the letter n stands for the unknown number ($n = 7$)

Variable

Write the definition:

$$x + 2 = 7$$

balanced with =

$7 + 3 = 10$ — both sides equal 10

Equal sign

Write the definition:

$$3x + 5$$

no equal sign

$2x + 5$ is an expression; it becomes an equation when you write $2x + 5 = 15$

Expression

Write the definition:

Guided Notes Level 2 Standard



WHAT WE'RE LEARNING TODAY

I can write an equation to represent a real-world situation.



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



WORD BANK – FILL EACH BLANK WITH THE BEST WORD

Equation

Variable

Equal sign

Expression



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

1 A math sentence that says two amounts are equal, with an = sign, is an


2 A letter that stands for an unknown number is a .

3 The symbol = that shows two amounts are the same is the

4 A group of numbers and variables with no equal sign is an

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: Which equation represents: 'A number plus 12 equals 30'?

- A. $n + 12 = 30$
- B. $n - 12 = 30$
- C. $12n = 30$
- D. $n / 12 = 30$

Step 1 'Plus' means addition, so the equation is $n + 12 = 30$.

 **Answer:** A. $n + 12 = 30$

 **We do – together**

Solve this one with your class using the same steps.


Problem: Which equation represents: 'Seven less than a number is 18'?

- A. $n - 7 = 18$
- B. $7 - n = 18$
- C. $n + 7 = 18$
- D. $n / 7 = 18$

Step 1 _____

Step 2 _____

Answer: _____

 **You do — your turn**

Now try one on your own. Show every step.

Problem: Which equation represents: 'Three times a number equals 21'?

- A. $3n = 21$
- B. $n + 3 = 21$
- C. $n - 3 = 21$
- D. $n / 3 = 21$

Show your work:

Try It

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

1. Ledger note: 'Six times the number of stolen coins equals 54.' Which equation models this clue?

- A. $6c = 54$
- B. $c + 6 = 54$
- C. $c - 6 = 54$
- D. $c / 6 = 54$

Show your work:

2. Vault log: 'A number of gold bars shared equally into 5 cases puts 4 bars in each case.' Which equation models this clue?

- A. $b / 5 = 4$
- B. $5b = 4$
- C. $b - 5 = 4$
- D. $b + 5 = 4$

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

Write a real-world situation that can be modeled by the equation $n / 5 = 9$. Explain what n represents and verify your equation makes sense.

Sentence starter: Situation: _____. In this problem, n represents _____. Check: $n =$ _____ because _____ $\div 5 = 9$.

Show your work:

Reflect — Exit Ticket

Which equation represents: 'A number divided by 6 equals 9'?

- A. $n / 6 = 9$
- B. $6n = 9$
- C. $n - 6 = 9$
- D. $n + 6 = 9$

Your answer:
