



Chapter 6

Equations

6-1A: Equations

Main Idea: Solve equations by using mental math and the guess, check, and revise strategy.

CCSS: 6.NS.5

Vocabulary:

- Equation - mathematical sentence showing two expressions are equal
- Equals sign - an equation has this, =
- Solve - when you replace a variable with a value that makes a true sentence
- Solution - value that makes the equation true



Solve an equation mentally:

Is 5, 6, or 7 the solution of the equation $4 + b = 10$?

Use guess and check or mental math

Solve $24 = 4x$ mentally.

Real World Example: Ryan and Hannah have 72 marbles together. Hannah has 12 marbles. Solve the equation $72 - r = 12$ to find r , the number of marbles Ryan has.





Homework:

p. 316 #12 - 34




6-1D: Solve and Write Addition Equations

Main Idea: Solve and write addition equations


CCSS: 6.NS.6, 6.NS.7

Vocabulary:

- Inverse operations: operations that undo each other
- **Subtraction Property of Equality:** If you subtract the same number from each side of an equation, the two sides remain equal.



Example: Solve $x + 4 = 5$. Check your answer



Example: Solve $c + 2 = 5$. Check your answer.

Example: Solve $3 + y = 11$. Check your answer.

Example: It takes 43 facial muscles to frown. This is 26 more than it takes to smile. Write and solve an equation to find the number of muscles it takes to smile.



Homework:

p. 325 #7 - 22


6-1F: Solve and Write Subtraction Equations

Main Idea: Solve and write subtraction equations


CCSS: 6.NS.6, 6.NS.7

Addition Property of Equality:

If you add the same number to each side of an equation, the two sides remain equal.



Example: Solve $x - 5 = 10$. Check your answer.



Example: Solve $x - 7 = 15$. Check your answer.

Real World Example: Brenic is 13 years old. This is 5 years younger than his older cousin Kaitlyn. Write and solve a subtraction equation to find Kaitlyn's age.



Homework:

p. 330 #6 - 21

6-2B: Solve and Write Multiplication Equations

Main Idea: Solve and write multiplication equations

CCSS: 6.EE2b, 6.NS.6, 6.NS.7

Vocabulary:

- Coefficient - number that is multiplying the variable
- **Division Property of Equality:** if you divide each side of an equation by the same number (not zero), the two sides remain equal.



Example: Solve $6x = 18$. Check your answer.

Example: Solve $21 = 3m$. Check your answer.

Real World Example: Mason has \$40 to spend on lunch. He spent \$5 every day. How many days did he buy lunch? Write an equation and solve.



Homework:


p. 337 # 6 - 22, 24



6-2D: Solve and Write Division Equations

Main Idea: Solve and write division equations

CCSS 6.NS.6, 6.NS.7



Multiplication Property of Equality: If you multiply each side of an equation by the same number, both sides remain equal.

Example: Solve $\frac{x}{8} = 9$

Example: Solve $\frac{x}{7} = 56$

Real World Example: One fourth of the number of students in the 6th grade participate in an after-school sport. If 22 students play sports, write and solve a division equation to find the number of students in the 6th grade.





Homework:

p. 342 #9 - 31 odd



Chapter 6 Test