

# Lesson 3

Write an Equation  
Unknown Numbers in Addition, Subtraction,  
Multiplication, and Division

# Power Up Discussion

- Simon held a **number cube** so that he could **see the dots on three of the faces**. Simon said he could see **7 dots**. How many dots could he not see?

# Solution

- (Number of dots on a die) - (Number of dots you can see) = Number unseen
- $(1+2+3+4+5+6 = 21) - (7) = 14$

# Power Up

- Mental Math

# Addition Equation

- An equation is a statement that two quantities are equal. Here we show two equations:
  - $3 + 4 = 7$
  - $5 + a = 9$

# Equations

- Addition equation may have an unknown sum or addend
- $2 + a = 4$ , or  $2 + 2 = b$
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# Example

a.  $n + 53 = 75$

b.  $26 + a = 61$

c.  $3 + 4 + n + 7 + 8 = 40$

# Subtraction Equation

- May have an unknown Minuend, Subtrahend, or Difference
- $a - 4 = 0, 4 - b = 9, 5 - 9 = c$

# Examples

a.  $p - 24 = 17$

b.  $32 - x = 14$

# Multiplication Equation

- May have an unknown factor or product
- $3 \cdot 2 = p$  3
- $f = 6$   $r \times 2 = 6$

# Example

a.  $12n = 168$

b.  $7k = 105$

# Division Equation

- May have an unknown Dividend, Divisor, or Quotient

Unknown Quotient

$$\frac{24}{3} = n$$

Unknown Divisor

$$\frac{24}{m} = 8$$

Unknown Dividend

$$\frac{p}{3} = 8$$

# Example

Find the unknown number in each equation:

a.  $\frac{a}{3} = 15$

b.  $\frac{64}{b} = 4$

# Review

- To solve for an unknown number (variable) perform **inverse operations**
- We have 4 arithmetic operations
- We have 4 types of equations

# Homework

- Written Practice
- Due Friday