

## Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10

In this module we will go deep into our learning about these two related operations. Students will practice their math facts to become fluent, and will learn several strategies for multiplying and dividing numbers.



$$2 \times 3 \text{ ones} = 6 \text{ ones}$$

$$2 \times 3 = 6$$



$$2 \times 3 \text{ tens} = 6 \text{ tens}$$

$$2 \times 30 = 60$$

Students will learn to relate simple one-digit facts to similar facts in the place value family.

## Key Words to Know

**Array:** a set of numbers or objects that follow a specific pattern

**Commutative Property:** e.g.  $3 \times 2 = 2 \times 3$

**Distributive Property:** e.g.  $12 \times 3 = (10 + 2) \times 3 = (10 \times 3) + (2 \times 3)$

**Factors:** numbers that are multiplied to obtain a product  
**Multiple:** e.g. multiples of 9 are 18, 27, 36, 45, etc.

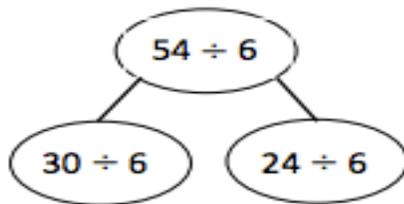
**Number bond:** model used to show part-part-whole relationships

**Product:** the quantity resulting from multiplying factors

**Quotient:** the answer when one number is divided by another

**Tape diagram:** a method for modeling problems

This is a strategy for division:



Students use facts they already know to help solve an unknown fact.

$$54 \div 6 = (30 \div 6) + (24 \div 6)$$

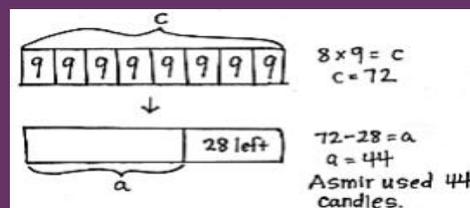
$$= 5 + 4$$

$$= 9$$

## Module 3 Sample Problem

(Example taken from Lesson 11)

Asmir buys 8 boxes of 9 candles for his dad's birthday. After putting some candles on the cake, there are 28 candles left. How many candles does Asmir use?



## + How you can help at home:

- ⇒ Continue to review multiplication and division math facts with your student
- ⇒ Help your student notice related math facts, e.g.  $4 \times 2 = 8$ ,  $4 \times 20 = 80$ ,  $40 \times 2 = 80$

## Key Idaho Content Standards:

- Represent and solve problems involving multiplication and division
- Understand properties of multiplication and the relationship between multiplication and division
- Multiply and divide within 100
- Solve problems involving the four operations
- Use place value understanding and properties of operations to perform multi-digit arithmetic