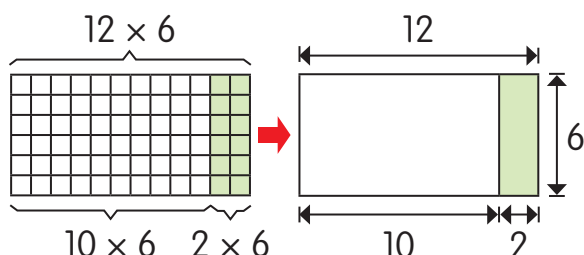


# Glossary

## A

- **area model**

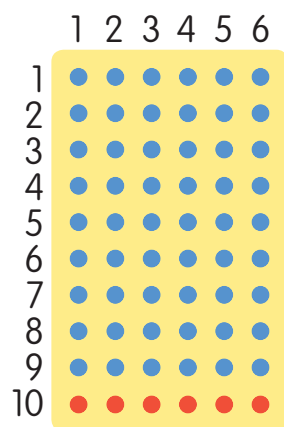
An area model can be used to show multiplication facts.



$$\begin{aligned} 12 \times 6 &= (10 \times 6) + (2 \times 6) \\ &= 60 + 12 \\ &= 72 \end{aligned}$$

- **array model**

An array model can also be used to show multiplication facts.



$$\begin{aligned} 9 \times 6 &= (10 \times 6) - (1 \times 6) \\ &= 60 - 6 \\ &= 54 \end{aligned}$$

- **associative property**

– Addition:  
Changing the order of adding a set of numbers does not change the answer.

$$\begin{array}{ll} 5 + 7 + 3 & 5 + 7 + 3 \\ = 12 + 3 & = 5 + 10 \\ = 15 & = 15 \end{array}$$

So,  $5 + 7 + 3 = 15$ .

– Multiplication:  
Changing the order of multiplying a set of numbers does not change the answer.

$$\begin{array}{ll} 9 \times 2 \times 3 & 9 \times 2 \times 3 \\ = 18 \times 3 & = 9 \times 6 \\ = 54 & = 54 \end{array}$$

So,  $9 \times 2 \times 3 = 54$ .

## D

- **difference**

When you subtract two numbers, the answer is the difference.

$$3,368 - 1,254 = 2,114$$

The difference between 3,368 and 1,254 is 2,114.

- **distributive property (of multiplication)**

When multiplying two numbers, one of the numbers can be broken up into its sum to multiply quickly.

$$\begin{aligned} 7 \times 8 &= (5 \times 8) + (2 \times 8) \\ &= 40 + 16 \\ &= 56 \end{aligned}$$

## E

- **estimate**

An estimate is a number close to the exact number.

765 is 770 when rounded to the nearest ten.

770 is an estimate of 765.

- **equation**

An equation is a statement that shows a value using the “=” sign.

“ $9 + 1 = 10$ ” and “ $28 - 2 = 26$ ” are equations.

## I

- **identity property (for addition)**

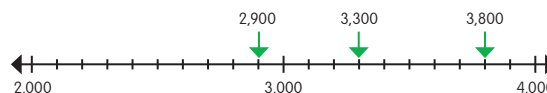
When any number is added to zero, the result is the number itself.

$$8 + 0 = 8 \qquad 0 + 10 = 10$$

## N

- **number line**

Numbers can be placed on a number line for comparison.



## P

- **product**

When you multiply, the answer is the product.

$$423 \times 3 = 1,269$$

The product of 423 and 3 is 1,269.

## Q

- **quotient**

When you divide, the answer is the quotient.

$$48 \div 6 = 8$$

8 is the quotient when 48 is divided by 6.

# R

- reasonable**

An answer is reasonable when it is close to the estimate of the answer.

$$1,482 + 1,516 = 2,998$$

1,482 and 1,516 are each 1,500 when rounded to the nearest hundred.

$$1,500 + 1,500 = 3,000$$

2,998 is close to 3,000.

So, the answer is reasonable.

- round**

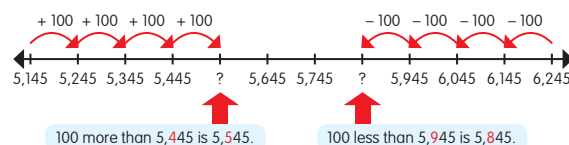
Numbers can be rounded to the nearest ten or hundred in estimation.

762 is 760 when rounded to the nearest ten.

287 is 300 when rounded to the nearest hundred.

- rule**

Numbers in a pattern follow a rule.



5,145	5,245	5,345	5,445	?	5,645	Rule: Add 100.
6,245	6,145	6,045	5,945	?	5,745	Rule: Subtract 100.

# S

- sum**

When you add, the answer is the sum.

$$2,643 + 106 = 2,749$$

The sum of 2,643 and 106 is 2,749.

# T

- ten thousand**

10,000 is the number that comes right after 9,999.

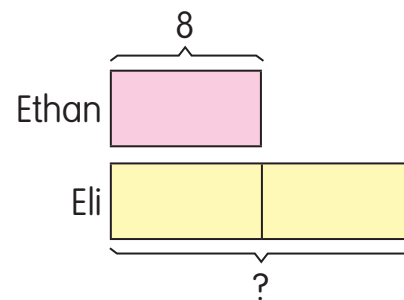
$$9,999 + 1 = 10,000$$

- twice**

Twice is two times of a number.

Ethan has 8 stamps.

Eli has twice as many stamps.



$$2 \times 8 = 16$$

Eli has 16 stamps.