

VARIABLES

Today's Destination What is a variable?

A



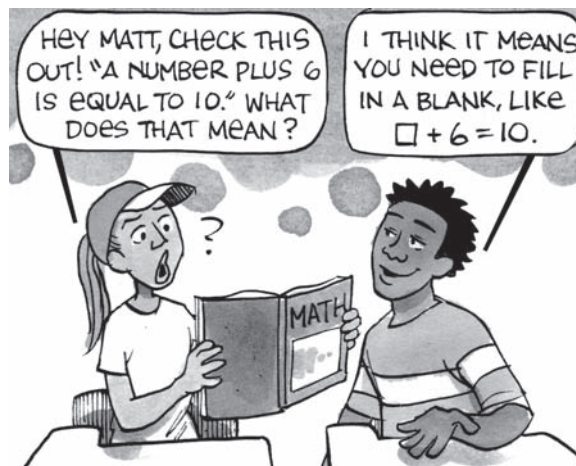
Vocabulary

Equation A number sentence relating two expressions that are equal in value

Variable A letter or symbol that represents an unknown value or a value that can change



Problem of the Day



What is the answer to Marta's math problem? _____

A



RULES OF THE ROAD

In mathematics, we sometimes use a box to stand for a number whose value we don't know.

What number could go in the box to make the number sentence true?

$$5 + \square = 12$$

WHEN I ADD THE NUMBER TO 5, I GET 12.
I KNOW WHAT NUMBER PLUS 5 IS 12!

Compute It!

$$5 + 7 = 12$$

THAT MEANS THAT THE UNKNOWN
NUMBER IS 7.

Write It!

$$5 + \boxed{7} = 12$$

Try It
Out!

Write the number that makes each number sentence true.

1) $114 - \square = 106$

2) $6 \times \square = 30$

3) $42 \div \square = 7$

4) $5 + \square = 14$

5) $8 \times \square = 56$

A



IN THE DRIVER'S SEAT

Write the number in the box that would make each number sentence true.

1) $32 \div \square = 8$

2) $\square + 10 = 19$

3) $10 \times \square = 80$

Find the value of the variable.

4) $8 \times a = 8$

 **Compute It!**

$a = \underline{\hspace{2cm}}$

5) $x + 8 = 9$

 **Compute It!**

$x = \underline{\hspace{2cm}}$

6) $17 + w = 22$

 **Compute It!**

$w = \underline{\hspace{2cm}}$

7) $40 \div b = 5$

 **Compute It!**

$b = \underline{\hspace{2cm}}$

8) $y - 7 = 8$

 **Compute It!**

$y = \underline{\hspace{2cm}}$

9) $3 \times m = 21$

 **Compute It!**

$m = \underline{\hspace{2cm}}$

A



TEST DRIVE

- 1** What value of k would make the number sentence below true?

$$k \div 4 = 8$$

- A $\frac{1}{2}$
- B 2
- C 12
- D 32



Substitute each answer into the number sentence to find the one that makes it true.

- 2** Which equation represents “the sum of 4 and an unknown number is 10”?

- F $4 \times n = 10$
- G $4 + n = 10$
- H $4 \times 10 = 40$
- J $4 + 10 = 14$



You can use a variable to stand for the unknown number.

 **SIDE TRIPS**

1) Write the number each symbol represents.

$$20 - \star = 10$$

$$\blacktriangle + 8 = 11$$

Compute It!

$$\star = \underline{\hspace{2cm}}$$

Compute It!

$$\blacktriangle = \underline{\hspace{2cm}}$$

Now use the values you found to solve the problems below.

$$\star + \blacktriangle = ?$$

$$\star - \blacktriangle = ?$$

Compute It!

$$\star + \blacktriangle = \underline{\hspace{2cm}}$$

Compute It!

$$\star - \blacktriangle = \underline{\hspace{2cm}}$$

2) Write a word problem that can be represented with the equation $10 + j = 14$.

Write It!

3) Hana is seven years younger than her sister Sajitha. In the equation below, Sajitha's age is represented by S and Hana's age is represented by H .

$$S - 7 = H$$

If Sajitha is 30 years old, what is Hana's age?

Compute It!

Write It!

Hana is _____ years old.

If Hana is 25 years old, what is Sajitha's age?

Compute It!

Write It!

Sajitha is _____ years old.