

Solving Linear Equations in One Variable

A Formative Assessment Lesson

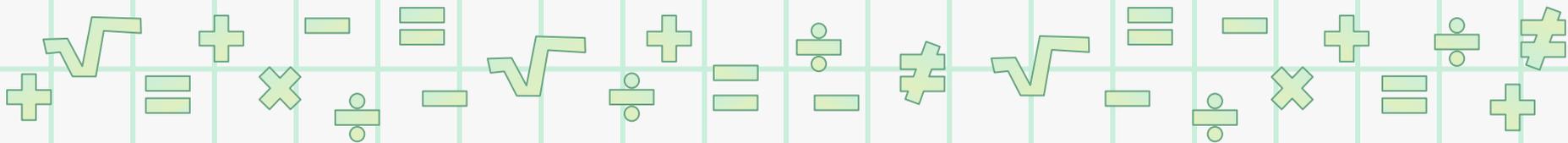
Let's get started!

True or False?

$$4x + 1 = 3$$

Can you give me a value for x that makes this equation false?

Show the calculations that explain this answer.

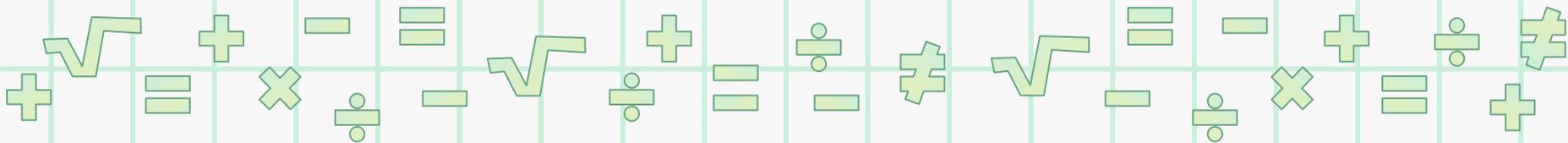


True or False?

$$4x + 1 = 3$$

Can you give me a value for x that makes this equation true?

Show the calculations that explain this answer.



How many different values of x make the equation true?

Cheryl:

$$x = 2$$

$$4 \times 2 + 1 = 9 \quad \times \text{ (not 3)}$$

$$x = 1$$

$$4 \times 1 + 1 = 5 \quad \times$$

$$x = 0$$

$$4 \times 0 + 1 = 1 \quad \times$$

$$x = \frac{1}{2}$$

$$4 \times \frac{1}{2} + 1 = 3 \quad \checkmark$$

There is only one value for x that makes the equation true.

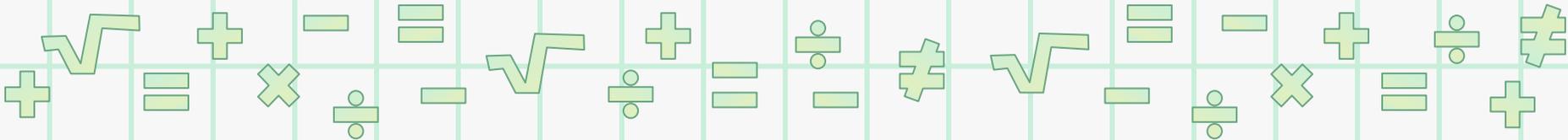
Stacey:

$$4x + 1 = 3$$

This means $4x = 2$ and this always has to be true.

To make 2 x must be a $\frac{1}{2}$ because $4 \times \frac{1}{2} = 2$

x can't be any other value.



Always, Sometimes, or Never

True?

1. You will be given a set of cards.
2. Group the equations by their type of solution:
Always True Sometimes True Never True

3. If you think the equation is sometimes true, be prepared to give values of x for which it is true and for which it is false.
4. If you think the equation is always true or never true, be prepared to explain how you can be sure this is the case.

Let's see what you learned.
See your teacher for a quick
formative assessment.