LESSON MAKER PRO

Check It Twice

Solve each equation, then prove your answer works.

GRADE 8 · 8.PFA.4.g

8.PFA.4.g "Confirm algebraic solutions to linear equations in one variable."

NAME _____ DATE _____

CONFIRM BY SUBSTITUTING

After you solve a linear equation, substitute your value for x in the original equation. If both sides have the same value, your solution is confirmed. Use inverse operations to isolate x before you check.

WORKED EXAMPLE

Solve and confirm: $9x + 4 = 49$

1. Subtract 4 from both sides: $9x = 45$
2. Divide both sides by 9: $x = 5$
3. Confirm: $9(5) + 4 = 49$

Answer: x = 5

PRACTICE 6 problems

1 Solve and confirm: $3x + 8 = 29$

ANSWER _____

2 Solve and confirm: $2x - 11 = 15$

ANSWER _____

3 Solve and confirm: $21 = 3x + 12$

ANSWER _____

4 Solve and confirm: $8x - 10 = 46$

ANSWER _____

5 Solve and confirm: $12 - 2x = -8$

ANSWER _____

6 Solve and confirm: $7x + 2 = 3x + 26$

ANSWER _____

APPLY IT Show your work

1 Three tickets to a school esports event cost the same amount. A $3 service credit is applied, and the total paid is $27. Let x be the price of one ticket. Write and solve an equation, then confirm your answer.

WORK SPACE

ANSWER _____

2 A music app charges $12 to start a month and $2 for each downloaded album. The bill is $26. Let x be the number of downloaded albums. Write and solve an equation, then confirm your answer.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Solve and confirm: $2(3x + 1) + 7 = x + 24$

WORK SPACE AND ANSWER

ANSWER KEY

Check It Twice

GRADE 8 · 8.PFA.4.g

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Solve and confirm: 3x + 8 = 29	**x = 7; 3(7) + 8 = 29**
2	Solve and confirm: 2x - 11 = 15	**x = 13; 2(13) - 11 = 15**
3	Solve and confirm: 21 = 3x + 12	**x = 3; 21 = 3(3) + 12**
4	Solve and confirm: 8x - 10 = 46	**x = 7; 8(7) - 10 = 46**
5	Solve and confirm: 12 - 2x = -8	**x = 10; 12 - 2(10) = -8**
6	Solve and confirm: 7x + 2 = 3x + 26	**x = 6; 7(6) + 2 = 3(6) + 26**

PART 2 · APPLY IT

1. **x = 10** Use 3x - 3 = 27. Substituting confirms that 3(10) - 3 = 27.
2. **x = 7** Use 12 + 2x = 26. Substituting confirms that 12 + 2(7) = 26.

CHALLENGE

x = 3; 2(3(3) + 1) + 7 = 3 + 24, and 27 = 27

Accept correct inverse-operation work and a substitution check showing equal values on both sides. Equivalent confirmation statements are acceptable.