LESSON MAKER PRO

Solve It Cleanly

Use inverse operations to isolate one variable.

HIGH SCHOOL · HSA-REI.B.3

CCSS.Math.Content.HSA-REI.B.3 "Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters."

NAME _____ DATE _____

KEEP BOTH SIDES BALANCED

Undo operations in reverse order, and do the same operation to both sides of an equation or inequality. When you multiply or divide an inequality by a negative number, reverse the inequality sign. If a letter is a coefficient, divide by that letter only when it is not zero.

WORKED EXAMPLE

$14x + 9 = 51$

1. Subtract 9 from both sides: $14x = 42$.
2. Divide both sides by 14: $x = 3$.

Answer: x = 3

PRACTICE 6 problems

1 $7x - 4 = 24$

ANSWER _____

2 $-6x + 8 = -28$

ANSWER _____

3 $5(x - 2) > 30$

ANSWER _____

4 $(4/5)x + 1 = 13$

ANSWER _____

5 $11 - 2x <= -1$

ANSWER _____

6 $px - 12 = 20$

ANSWER _____

APPLY IT Show your work

1 The esports club charges a $16 entry fee plus $5 for each tournament. Your total is $41. How many tournaments did you enter?

WORK SPACE

ANSWER _____

2 You have $16 saved toward headphones that cost $64. You earn $8 for each dog walk. How many dog walks do you need to earn enough?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Solve (4/7)(x - 8) + 2 = (1/5)x + 16.

WORK SPACE AND ANSWER

Solve It Cleanly

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	7x - 4 = 24	**x=4**
2	-6x + 8 = -28	**x=6**
3	5(x - 2) > 30	**x>8**
4	(4/5)x + 1 = 13	**x = 15**
5	11 - 2x <= -1	**x >= 6**
6	px - 12 = 20	**x = 32/p, p != 0**

PART 2 · APPLY IT

1. **5 tournaments** Write 16 + 5t = 41. Subtract 16 and divide by 5, so t = 5.
2. **at least 6 dog walks** Write 16 + 8w >= 64. Subtract 16 and divide by 8, so w >= 6.

CHALLENGE

x = 50

For inequalities, accept equivalent interval notation. For px - 12 = 20, accept x = 32/p only with p != 0; if p = 0, the equation has no solution.