

Solving equations: watch the move, then make your move



NAME _____

CLASS _____

DATE _____

LEARNING GOAL

Solve linear equations and check each answer.

HOW TO PLAY

1. Watch: read each line and its move.
2. Play: solve the matching equation.
3. Check: substitute your answer.

SUCCESS CRITERIA

- ☐ I can do the same to both sides.
- ☐ I can solve with x on both sides or brackets.
- ☐ I can check by substituting.

1 One step

1 move

WATCH THE MOVE

$$x + 7 = 15$$

subtract 7 from both sides

$$x = 8$$

✓ Check $8 + 7 = 15$



YOUR MOVE

$$x + 12 = 31$$

$$x = \boxed{}$$

CHECK

2 Two steps

2 moves

WATCH THE MOVE

$$3x + 5 = 20$$

subtract 5 from both sides

$$3x = 15$$

divide both sides by 3

$$x = 5$$

✓ Check $3 \times 5 + 5 = 20$



YOUR MOVE

$$4x + 3 = 31$$

$$x = \boxed{}$$

CHECK

3 Unknowns on both sides

3 moves

WATCH THE MOVE

$$5x - 4 = 2x + 11$$

subtract $2x$ from both sides

$$3x - 4 = 11$$

add 4 to both sides

$$3x = 15$$

divide both sides by 3

$$x = 5$$

✓ Check
 $5 \times 5 - 4 = 21$
 $2 \times 5 + 11 = 21$



YOUR MOVE

$$6x - 5 = 2x + 7$$

$$x = \boxed{}$$

CHECK

4 Brackets

3 moves

WATCH THE MOVE

$$2(x + 3) = 14$$

expand: multiply each term by 2

$$2x + 6 = 14$$

subtract 6 from both sides

$$2x = 8$$

divide both sides by 2

$$x = 4$$

✓ Check $2 \times (4 + 3) = 14$



YOUR MOVE

$$3(x + 4) = 27$$

$$x = \boxed{}$$

CHECK

Level up, then spot the mistake



5 Level up

6 equations

Solve each equation. Show every move. Check by substituting, then colour the token.

LEVEL

1



a $5x + 2 = 37$

 $x =$

LEVEL

2



c $8x + 1 = 3x + 21$

 $x =$

LEVEL

3



e $4(x - 2) = 3x + 5$

 $x =$

b $2x - 9 = 11$

 $x =$

d $9x - 7 = 4x + 8$

 $x =$

f $2(2x + 1) = 5$

 $x =$

6 Spot the mistake

5 points

One move by a rival player is wrong. Find it, then make the right move.

RIVAL'S MOVE

- 1 $5(x - 2) = 3x + 4$ the equation
- 2 $5x + 10 = 3x + 4$ expand the brackets
- 3 $2x + 10 = 4$ subtract $3x$ from both sides
- 4 $2x = -6$ subtract 10 from both sides
- 5 $x = -3$ divide both sides by 2

The mistake is on line

EXPLAIN THE MISTAKE

MAKE THE RIGHT MOVE

CHECK 

BONUS ROUND

Make your own move: write an equation with unknowns on both sides that has the answer $x = 6$. Swap with a partner.

HOW SURE AM I?



Not yet



Getting there



Got it