

Name: _____

Date: _____

Score: _____ / 19

Solving Multi-Step Equations

Equations with brackets, fractions of steps and the variable on both sides.

Expand brackets first	Collect variables on one side	Isolate undo + - then $\times \div$	Check substitute back
---------------------------------	--	---	---------------------------------

Section A — Two Steps

Solve for x.

1. $5x + 7 = 37$, $x =$ _____

2. $8x + -12 = 20$, $x =$ _____

3. $3x + 15 = 42$, $x =$ _____

4. $7x + -9 = 26$, $x =$ _____

5. $6x + 10 = 58$, $x =$ _____

6. $9x + -27 = 0$, $x =$ _____

Section B — Variables Both Sides

Solve for x.

7. $4x + 3 = 9x - 22$, $x =$ _____

8. $6x + 2 = 3x + 23$, $x =$ _____

9. $5x + 8 = 2x + 20$, $x =$ _____

10. $9x + 1 = 4x + 31$, $x =$ _____

11. $7x + 5 = 3x + 37$, $x =$ _____

12. $8x + 4 = 2x + 58$, $x =$ _____

Section C — With Brackets

Solve for x.

13. $3(x + 4) + 2 = 32$, $x =$ _____

14. $5(x + 2) + 7 = 32$, $x =$ _____

15. $2(x + 9) + 5 = 39$, $x =$ _____

16. $4(x + 3) + 6 = 38$, $x =$ _____

Section D — Word Problems

Write an equation, then solve.

17. Twice a number, increased by 17, is 61. Find the number.

18. A plan costs \$18 plus \$0.25 per GB. A bill was \$33. GB used?

19. The perimeter of a rectangle is 58 cm; the length is 3 cm more than the width. Width?

Solving Multi-Step Equations — Answer Key

For marking. Accept equivalent correct forms.

Section A — Two Steps

1. 6

2. 4

3. 9

4. 5

5. 8

6. 3

Section B — Variables Both Sides

7. 5

8. 7

9. 4

10. 6

11. 8

12. 9

Section C — With Brackets

13. 6

14. 3

15. 8

16. 5

Section D — Word Problems

17. 22

18. 60

19. 13 cm
