Solving Equations with the Variable on Both Sides

Nov. 6

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3. $5x = 4x + 7$

$-4x \quad -4x$

$x = 7$

4. $6y = 7y - 4$

$-7y \quad -7y$

$\frac{-1y}{-1} = \frac{-4}{-1}$

$y = 4$

5. $3m = m + 4$

$-m \quad -m$

$\frac{2m}{2} = \frac{4}{2}$

$m = 2$

6. $7n = 4n - 6$

$-4n \quad -4n$

$\frac{3n}{3} = \frac{-6}{3}$

$n = -2$

Solve & Check

11. $2x = -30 + 5x$

$-5x \quad -5x$

$-3x = -30$

$\frac{-3x}{-3} = \frac{-30}{3}$

$x = +10$

L.S.

$2x$

$-2(10)$

-20

R.S.

$-30+5x$

$-30+5(10)$

$-30+50$

20 ✓

15. $2a = 0.35 - 5a$

$+5a \quad +5a$

$7a = 0.35$

$\frac{7a}{7} = \frac{0.35}{7}$

$a = 0.05$

$2a$

$2(0.05)$

0.10

$0.35 - 5a$

$0.35 - 5(0.05)$

$0.35 - 0.25$

0.10

17. $2x + 3x = 8x - 3$

$-8x \quad -8x$

$5x = 8x - 3$

$\frac{-3x}{-3} = \frac{-3}{-3}$

$x = 1$

20. $5a - 3a = 6 - a$

$+a \quad +a$

$2a = 6 - a$

$\frac{3a}{3} = \frac{6}{3}$

$a = 2$

21. $6s + 4s = 20 + 5s$

$-5s \quad -5s$

$10s = 20 + 5s$

$\frac{5s}{5} = \frac{20}{5}$

$s = 4$

ps. $5x - 3x = 4x - 2$

$-4x \quad -4x$

$2x = 4x - 2$

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

$x = 1$

L.S. | R.S.

$5x - 3x$ | $4x - 2$

$5(1) - 3(1)$ | $4(1) - 2$

$5 - 3$ | $4 - 2$

2 | 2

32.

$8y = 5y + y + 14$

$-6y \quad -6y$

$8y = 6y + 14$

$2y = +14$

$2y \div 2 = 14 \div 2$

$y = 7$

L.S	R.S
$8y$	$5y + y + 14$
$8(7)$	$5(7) + (7) + 14$
$= 56$	$35 + 7 + 14$
	$= 56$ ✓

33.

$$15x - 7x = -52 - 5x$$

$$+5x \qquad +5x$$

$$8x = -52 - 5x$$

$$\frac{13x}{13} = \frac{-52}{13}$$

$$x = -4$$

39. $3n = 10.1 + 9.9 - 2n$

$+2n \quad +2n$

$3n = 20 - 2n$

$\frac{5n}{5} = \frac{20}{5}$

$n = 4$

40. $2x + 10 = 9 + 11 - 3x$

$+3x \quad +3x$

$2x + 10 = 20 - 3x$

$-10 \quad -10$

$5x + 10 = 20 - 10$

$\frac{5x}{5} = \frac{10}{5}$

$x = 2$

L.S.

$2x + 10$

$2(2) + 10$

$4 + 10$

14

R.S

$9 + 11 - 3x$

$20 - 3(2)$

$20 - 6$

14

✓

44. $y = 3y - 12$

$-3y \quad -3y$

$\frac{-2y}{-2} = \frac{-12}{-2}$

$y = 6$

∴ Marlene scored 6 goals.

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