Answers

Solve $7n - 2 = 5n + 6$.

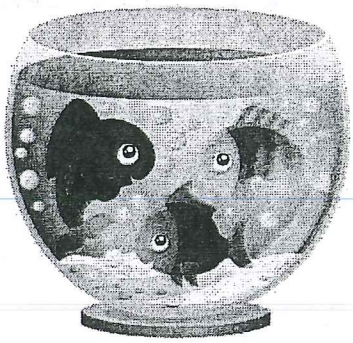
$7n - 2 = 5n + 6$
$-5n \quad -5n$
$2n - 2 = 6$
$+2 \quad +2$
$2n = 8$

To collect the variable terms on one side, subtract 5n from both sides.

$\frac{2n}{2} = \frac{8}{2}$

$n = 4$

Since n is multiplied by 2, divide both sides by 2 to undo the multiplication.



Solve each equation for the indicated variable.

1. $4x + 24 = 6x$

$-4x \quad -4x$
$\frac{24}{2} = \frac{2x}{2}$
$12 = x$

2. $3y - 8 = 13 - 4y$

$+4y \quad +4y$
$7y - 8 = 13$
$+8 \quad +8$
$\frac{7y}{7} = \frac{21}{7}$
$y = 3$

3. $5x = 14 - 2x$

$+2x \quad +2x$
$\frac{7x}{7} = \frac{14}{7}$
$x = 2$

4. $8x - 1 = 47 - 4x$

$+1 \quad +1$
$8x = 48 - 4x$
$+4x \quad +4x$
$\frac{12x}{12} = \frac{48}{12}$
$x = 4$

5. $20 + x = 2 - 5x$

$+5x \quad +5x$
$20 + 6x = 2$
$-20 \quad -20$
$\frac{6x}{6} = \frac{-18}{6}$
$x = -3$

6. $39x = 33x - 30$

$-33x \quad -33x$
$\frac{6x}{6} = \frac{-30}{6}$
$x = -5$

7. $\frac{x}{2} + 5 = x$

$-5 \quad -5$
$(2)\frac{x}{2} = (x - 5)(2)$
$x = 2x - 10$
$-2x \quad -2x$
$(-1) -x = -10(-1)$
$x = 10$

8. $\frac{4}{5}x = 6 - \frac{1}{5}x$

$+\frac{1}{5}x \quad +\frac{1}{5}x$
$\frac{5}{5}x = 6$
$x = 6$

9. $4y + 5 = 6y + 7$

$-4y \quad -4y$
$5 = 2y + 7$
$-7 \quad -7$
$\frac{-2}{2} = \frac{2y}{2}$
$-1 = y$