More about equations.

Example1 Method A

Solve $4x - 3 = x + 6$

$4x - 3 = x + 6$

$-x \qquad -x$

$3x - 3 = \quad + 6$

Eliminate x from the right hand side by adding its own inverse $-x$ on both sides.

Eliminate -3 from the left hand side by adding its own inverse $+3$ on both sides

$3x - 3 = \quad + 6$

$+ 3 \qquad + 3$

$\frac{3x}{3} = \frac{9}{3}$

$x = 3$

Divide each side by 3 in order to leave only x.

Method B

Solve: $4x - 3 = x + 6$

$4x - 3 = x + 6$

$4x - 3 + 3 = x + 6 + 3$

$4x = x + 9$

$4x - x = x - x + 9$

$3x = 9$

$\frac{3x}{3} = \frac{9}{3}$

$x = 3$

Note: For questions which have brackets, first remove the brackets.

Exercise 14:35 Solve:

1. $2x + 4 = x + 11$
2. $2x - 4 = x + 4$
3. $2x - 7 = x + 1$
4. $3x + 5 = 2x + 7$
5. $5x + 1 = 4x + 4$
6. $7x - 4 = 3x + 8$
7. $9x - 7 = 5x + 13$
8. $6x - 8 = 4x + 4$
9. $5x + 7 = x + 27$
10. $11x + 3 = x + 33$

Exercise 14:36 Solve:

1. $4x - 3 = 2x + 9$
2. $5x + 4 = 3x - 8$
3. $2(x + 4) = x + 10$
4. $3(x - 2) = 2(x - 1)$
5. $5(x - 2) = 2(x - 2)$
6. $7(x - 2) = x + 10$
7. $2(4x + 4) = (4x - 12)$
8. $6(x - 1) = 4(x - 12)$
9. $3(x - 1) = 2(x + 1)$
10. $6(x + 4) = 3(x - 2)$