SOLVING EQUATIONS WITH THE UNKNOWN ON BOTH SIDES WITH BRACKETS

Answer all of these questions. Remember to show your working out in all questions.

MAIN QUESTIONS

1. $2(x + 3) = x + 8$ — $x = 2$

2. $3(2x - 1) = 4x + 5$ — $x = 4$

3. $5(x - 2) = 3x + 4$ — $x = 7$

4. $4(3x + 1) = 2(5x - 3)$ — $x = -5$

5. $2(4x - 3) = 3(2x + 1)$ — $x = 4.5$

6. $5(2x + 3) - 2(x - 1) = 3x + 17$ — $x = 0$

7. $3(x + 4) - 2(2x - 1) = x - 6$ — $x = 10$

8. $4(2x - 3) + 5(x + 1) = 3(4x - 2)$ — $x = 7$

9. $2(3x - 5) = 4(x + 1) + 3(2x - 3)$ — $x = -0.5$

10. $5(2x - 1) - 3(x + 2) = 4(3x - 1) - 2(2x + 3)$ — $x = 1.5$

11. $3(4x - 2) + 2(3x + 1) = 5(2x - 3) + 4(x + 2)$ — $x = -1.5$

12. $2(5x - 3) - 3(2x + 4) = 4(3x - 1) - 5(x + 2)$ — $x = 2$

13. $4(3x - 2) + 3(2x + 5) = 2(5x - 1) + 5(2x + 3)$ — $x = -6$

14. $5(2x - 3) - 2(3x + 4) = 3(4x - 1) - 4(2x - 5)$ — $x = 4$

15. $3(4x - 5) + 2(3x + 1) = 5(2x - 3) + 4(3x + 2)$ | $x = -4$

16. $4(5x - 2) - 3(2x + 5) = 2(3x - 4) + 5(2x + 1)$ | $x = 5$

MASTER QUESTIONS

M1. A rectangle's length is 3cm more than twice its width. If the perimeter is 36cm, find the dimensions. | Width = 5cm, Length = 13cm

M2. Three consecutive integers sum to 48. Find the integers. | 15, 16, 17

M3. A number is doubled, then increased by 5, resulting in the same value as when the number is tripled and decreased by 3. Find the number. | 8

M4. The sum of two numbers is 25. One number is 7 more than the other. Find both numbers. | 9 and 16