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

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1. $2(x + 3) = x + 8$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MASTER QUESTIONS

M1. A rectangle's length is 3cm more than twice its width. If the perimeter is 36cm, find the dimensions.

M2. Three consecutive integers sum to 48. Find the integers.

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.

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