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

2. $3(2x - 1) = 5x + 7$ | x = 10

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

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

5. $2(3x - 4) + 5 = 4x + 7$ | x = 5

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

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

8. $2(3x + 4) - 3(2x - 1) = 5x - 2$ | x = -13

9. $5(2x - 3) + 4(3x + 1) = 2(7x - 4)$ | x = 3

10. $3(4x - 2) - 2(3x + 5) = 4(x - 1) + 3$ | x = 23/2

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

12. $4(2x - 3) - 3(3x + 2) = 2(5x - 1) - (4x + 7)$ | x = -1

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. The sum of three consecutive even numbers is 54. Find the numbers.

16, 18, 20

M3. A number is multiplied by 4 and then 5 is added. The result is the same as when the number is multiplied by 3 and then 8 is subtracted. Find the number.

-13

M4. The area of a rectangle is 60cm^2. If the length is 4cm more than the width, find the dimensions.

Width = 6cm, Length = 10cm

M5. A father is three times as old as his son. In 12 years, he will be twice as old. Find their current ages.

Son = 12 years, Father = 36 years