

## Year 8 Algebra Worksheet



A. Solve the following linear equations and find the value of variable x:

1)  $5x+1=31$

2)  $-4x+7=-37$

3)  $-x-3=-4$

4)  $8x-12=60$

5)  $(7x/5)-1=83$

6)  $-6x+9=-45$

7)  $-3x-12=-30$

8)  $-6x=-24$

9)  $-3x+1=-20$

10)  $-3x-9=-21$

11)  $4x-10=38$

12)  $7x+9=86$

13)  $-6x+8=-46$

14)  $2x-2=2$

15)  $(x/7)-6=-1$

B. Simplify the following expressions:

1)  $2(4 + 2r)$

2)  $6(1 + 3j) + 4$

3)  $8d + 2(4 + 8d)$

4)  $2x + 3(x + 5y)$

5)  $(3x + 5y) - (2x - 3y)$

C. Simplify each expression and then determine the value when  $n = 4$ .

1.  $8n + 4n$

2.  $7n + 7 + n$

3.  $2(n + 3) + 5$

4.  $12n - 7n + 60$

5.  $4(n-4)$

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D. Solve the following linear equations and find the value of the variable  $x$

1)  $-18 - 6x = 6(1 + 3x)$

2)  $5x + 34 = -2(1 - 7x)$

3)  $2(4x - 3) - 8 = 4 + 2x$

4)  $3x - 5 = -8(6 + 5x)$

5)  $-(1 + 7x) - 6(-7 - x) = 36$

6)  $-3(4x + 3) + 4(6x + 1) = 43$

7)  $2(6 - x) - 3x = 22$

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

9)  $4(2x - 2) + 2(1 - x) = 9 + x$

10)  $6(1 - 3x) - 2(2x - 1) = -18x$