

Homework: Distributive Property

Simplify by distributing and collecting like terms. Show your work. The 1st one is done for you.

1. $3(4x + 6) + 7x =$
 $12x + 18 + 7x = 19x + 18$

11. $6m + 3(2m + 5) + 7 = 12m + 22$

2. $7(2 + 3x) + 8 = 21x + 22$

12. $5(m + 9) - 4 + 8m = 13m + 41$

3. $9 + 5(4x + 4) = 20x + 29$

13. $3m + 2(5 + m) + 5m = 10m + 10$

4. $12 + 3(x + 8) = 3x + 36$

14. $6m + 14 + 3(3m + 7) = 15m + 35$

5. $3(7x + 2) + 8x = 29x + 6$

15. $4(2m + 6) + 3(3 + 5m) = 23m + 33$

6. $3(4x^2y^3 + 2x^2) + 4(2x^2 + 3x^2y^3) =$
 $24x^2y^3 + 14x^2$

16. $2(1x^3y + 5x^2 + 3xy) + 3(4xy + 2x^2 + 5x^3y) =$
 $17x^3y + 16x^2 + 18xy$

Simplify the expression first. Then evaluate the resulting expression for the given value of the variable.

7. $3x + 5(2x + 6) =$ _____ if $x = 4$
 $3x + 10x + 30 =$
 $13x + 30 =$
 $13(4) + 30 = 82$

17. $9(2m + 1) + 2(5m + 3) =$ _____ if $m = 2$
 $28m + 15$
 71

8. $4 + 6(2x + 7) =$ _____ if $x = 3$
 $12x + 46$
 82

18. $7(7 + 5m) + 4(m + 6) =$ _____ if $m = 1$
 $39m + 73$
 112

9. $8 + 5(9 + 4x) =$ _____ if $x = 2$
 $53 + 20x$
 93

19. $2(4m + 5) + 8(3m + 1) =$ _____ if $m = 3$
 $32m + 18$
 114

10. $6(4x + 7) + x =$ _____ if $x = 2$
 $25x + 42$
 92

20. $5(8 + m) + 2(7m - 7) =$ _____ if $m = 3$
 $19m + 26$
 83