**Distributive Property & Collecting Like Terms Homework Name \_\_\_\_\_\_\_\_\_**

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

1. 3(4*x* + 6) + 7*x* = 2. 6*m* + 3(2*m* + 5) + 7 =

12 *x* + 18 + 7*x =* 19*x*  + 18

3. 7(2 + 3*x*) + 8 = 4. 5(*m* + 9) - 4 + 8*m* =

5. 9 + 5(4*x* + 4) = 6. 3*m* + 2(5 + *m*) + 5*m* =

7. 12 + 3(*x* + 8) = 8. 6*m* + 14 + 3(3*m* + 7) =

9. 3(7*x* + 2) + 8*x* = 10. 4(2*m* + 6) + 3(3 + 5*m*) =

11. 3(4*x* + 2y) + 4(2*x* + 3*y*) = 12. 2(*x* + 5y + 3z) + 3(4*x* + 2y + 5z) =

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

13. 3*x* + 5(2*x* + 6) = \_\_\_\_\_ if *x* = 4 14. 9(2*m* + 1) + 2(5*m* + 3) = \_\_\_\_\_ if *m* = 2

3*x* + 10*x* + 30 =

13*x* + 30 =

13(4) + 30 = 82

15. 4 + 6(2*x* + 7) = \_\_\_\_\_ if *x* = 3 16. 7(7 + 5*m*) + 4(*m* + 6) = \_\_\_\_\_ if *m* = 1

17. 8 + 5(9 + 4*x*) = \_\_\_\_\_ if *x* = 2 18. 2(4*m* + 5) + 8(3*m* + 1) = \_\_\_\_\_ if *m* = 3

19. 6(4*x* + 7) + *x* = \_\_\_\_\_ if *x* = 2 20. 5(8 + *m*) + 2(7*m* – 7) = \_\_\_\_\_\_ if *m* = 3