

Examples: With Parentheses

When multiplying two factors, and at least one factor has multiple terms, use the

distributive property to simplify the product.

1. $3(b+9) + 10$

a. Distribute: $\underline{3b + 27 + 10}$

b. Simplify: $\underline{3b + 37}$

2. $4y - 7 + 8(y+5)$

a. Distribute: $\underline{4y - 7 + 8y + 40}$

b. Simplify: $\underline{12y + 33}$

HW: Writing Expressions: Write the following expressions in algebraic form.

3. the quotient of z and 9 $\underline{\frac{z}{9}}$

4. the total of n and 40 $\underline{n + 40}$

5. the sum of 8 and m $\underline{8 + m}$

6. x divided by 5 $\underline{\frac{x}{5}}$

7. the difference of h and 7 $\underline{h - 7}$

8. 23 less than p $\underline{p - 23}$

9. the product of g and 2 $\underline{2g}$

10. 77 plus twice v $\underline{2v + 77}$

11. 9 more than c $\underline{9 + c}$

12. b minus 4 $\underline{b - 4}$

13. two times the quantity of r increased by twelve $\underline{2(r + 12)}$

Simplifying Expressions: Identify the coefficient and constant(s) in expressions.

14. $8x^2 + 9x - 3$

a) coefficient(s): $\underline{8 \ 9}$

b. constant(s): $\underline{-3}$

15. $17a^4 - 2a^2 + a - 1$

a. coefficient(s): $\underline{17 \ -2 \ 1}$

b. constant(s): $\underline{-1}$

Simplify the following expressions. Clearly show your work.

16. $3(4x - 5) = \underline{12x - 15}$

17. $-4(x - 2) = \underline{-4x + 8}$

18. $9 - 7(b - 10) = \underline{-7b + 79}$

19. $2(b - 3) - 4(2b + 2) = \underline{-6b - 14}$

20. $2p^4 + 3p + 12 - 18p^4 - p - 7 = \underline{-16p^4 + 2p + 5}$