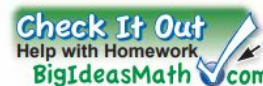


3.4 Exercises



Vocabulary and Concept Check

3. **WHICH ONE DOESN'T BELONG?** Which expression does *not* belong with the other three? Explain your reasoning.

$2(x + 2)$

$5(x - 8)$

$4 + (x \cdot 4)$

$8(9 - x)$

4. Identify the like terms in the expression $8x + 1 + 7x + 4$.

Use the Distributive Property to simplify the expression.

22. $9(2n + 1)$

24. $18(5 - 3w)$

26. $7(8 + x + 2)$

28. $6(10 + z + 3)$

30. $25(x - y)$

32. $13(n + 4 + 7m)$

33. **ERROR ANALYSIS** Describe and correct the error in rewriting the expression.



$$6(y + 8) = 6y + 8$$

TURN OVER →

34. **ART MUSEUM** A class of 30 students visits an art museum and a special exhibit while there.



PRICES		
	Museum	Exhibit
Child (under 5)	Free	Free
Student	\$8	\$x
Regular	\$12	\$4
Senior	\$10	\$3

- a. Use the Distributive Property to write and simplify an expression for the cost.

- b. Estimate a reasonable value for x . Explain.

- c. Use your estimate for x to evaluate the original expression and the simplified expression in part (a). Are the values the same?

5 Simplify the expression.

42. $x + 3 + 5x$

46. $n + 3(n - 1)$

48. $5(z + 4) + 5(2 - z)$

54. **ERROR ANALYSIS** Describe and correct the error in simplifying the expression.



$$\begin{aligned} 8x - 2x + 5x &= 8x - 7x \\ &= (8 - 7)x \\ &= x \end{aligned}$$

58. **REASONING** Simplify the expressions and compare. What do you notice? Explain.

$$4(x + 6)$$

$$(x + 6) + (x + 6) + (x + 6) + (x + 6)$$
