

Name: _____ Period: _____ Date: _____

The Distributive Property Assignment

Simplify the following expressions.

1. $8 - 3(2x - 5)$

2. $5(3x + 4) - 4$

3. $2(5x + 4) - 3$

4. $7(9) + 7(5)$

5. $2(5x - 1) + 14x$

6. $5(3s - 2) + 12x$

7. $7(3y - 5) + 2(4y + 3)$

8. $4(2y - 6) + 3(5y + 10)$

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9. $5(3y - 2) - (7y + 2)$

10. $4(5y - 3) - (6y + 3)$

11. $7 - 4[3 - (4y - 5)]$

12. $6 - 5[8 - (2y - 4)]$

13. $5x - 3[7 - 2(6x - 7) - 3x]$

14. $6 + 3[2x - 4(3x - 2)]$

15. A total of 2000 people attended a benefit concert was held to raise money for a children foundation. Student ticket cost \$2 and an adult ticket cost \$3. If the organizer raises a total of \$5050, how many students attended the concert?

Let : $x = \text{number of students}$

$2000 - x = \text{number of adults}$

The Distributive Property Assignment

ANSWER

Simplify the following expressions:

$$\begin{aligned} 1. \quad & 8 - 3(2x - 5) \\ & = 8 - 6x + 15 \\ & = -6x + 23 \end{aligned}$$

$$\begin{aligned} 2. \quad & 5(3x + 4) - 4 \\ & = 15x + 20 - 4 \\ & = 15x + 16 \end{aligned}$$

$$\begin{aligned} 3. \quad & 2(5x + 4) - 3 \\ & = 10x + 8 - 3 \\ & = 10x + 5 \end{aligned}$$

$$\begin{aligned} 4. \quad & 7(9) + 7(5) \\ & 63 + 35 \\ & = 98 \end{aligned}$$

$$\begin{aligned} 5. \quad & 2(5x - 1) + 14x \\ & = 10x - 2 + 14x \\ & = 24x - 2 \end{aligned}$$

$$\begin{aligned} 6. \quad & 5(3x - 2) + 12x \\ & = 15x - 10 + 12x \\ & = 27x - 10 \end{aligned}$$

$$\begin{aligned} 7. \quad & 7(3y - 5) + 2(4y + 3) \\ & = 21y - 35 + 8y + 6 \\ & = 29y - 29 \end{aligned}$$

$$\begin{aligned} 8. \quad & 4(2y - 6) + 3(5y + 10) \\ & = 8y - 24 + 15y + 30 \\ & = 23y + 6 \end{aligned}$$

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$$\begin{aligned}
 9. \quad & 5(3y - 2) - (7y + 2) \\
 & = 15y - 10 - 7y - 2 \\
 & = 8y - 12
 \end{aligned}$$

$$\begin{aligned}
 10. \quad & 4(5y - 3) - (6y + 3) \\
 & = 20y - 12 - 6y - 3 \\
 & = 14y - 15
 \end{aligned}$$

$$\begin{aligned}
 11. \quad & 7 - 4[3 - (4y - 5)] \\
 & = 7 - 4[3 - 4y + 5] \\
 & = 7 - 4[8 - 4y] \\
 & = 7 - 32 + 16y \\
 & = 16y - 25
 \end{aligned}$$

$$\begin{aligned}
 12. \quad & 6 - 5[8 - (2y - 4)] \\
 & = 6 - 5[8 - 2y + 4] \\
 & = 6 - 5[12 - 2y] \\
 & = 6 - 60 + 10y \\
 & = 10y - 54
 \end{aligned}$$

$$\begin{aligned}
 13. \quad & 5x - 3[7 - 2(6x - 7) - 3x] \\
 & = 5x - 3[7 - 12x + 14 - 3x] \\
 & = 5x - 3[21 - 15x] \\
 & = 5x - 63 + 45x \\
 & = 50x - 63
 \end{aligned}$$

$$\begin{aligned}
 14. \quad & 6 + 3[2x - 4(3x - 2)] \\
 & = 6 + 3[2x - 12x + 8] \\
 & = 6 + 3[8 - 10x] \\
 & = 6 + 24 - 30x \\
 & = 30 - 30x
 \end{aligned}$$

15. A total of 2000 people attended a benefit concert was held to raise money for a children foundation. Student ticket cost \$2 and an adult ticket cost \$3. If the organizer raises a total of \$5050, how many students attended the concert?

$$\begin{aligned}
 x &= \text{number of students} \\
 950 &= \text{number of students}
 \end{aligned}$$

$$\begin{aligned}
 2000 - x &= \text{number of adults} \\
 2000 - 950 &= 1050 = \text{number of adults}
 \end{aligned}$$

$$\begin{aligned}
 5050 &= 2x + 3(2000 - x) \\
 5050 &= 2x + 6000 - 3x \\
 5050 - 6000 &= -x \\
 -950 &= -x \\
 950 &= x
 \end{aligned}$$