Adding Expressions: Worked Answers

Each problem solved the way the lesson does it.

Name: _____ Date: _____

1. Add (2x + 3) + (5x + 4)
   - Drop the parentheses: 2x + 3 + 5x + 4.
   - Sort: (2x + 5x) + (3 + 4).

   Answer: 7x + 7

2. Add (7y − 2) + (3y + 6)
   - 7y + (−2) + 3y + 6.
   - Sort: (7y + 3y) + ((−2) + 6).

   Answer: 10y + 4

3. Add (−4a + 9) + (6a − 1)
   - (−4a) + 9 + 6a + (−1).
   - Sort: ((−4a) + 6a) + (9 + (−1)).

   Answer: 2a + 8

4. Add (3m − 5) + (−3m + 5)
   - 3m + (−5) + (−3m) + 5.
   - Each piece has its opposite.

   Answer: 0

5. Add (x + 2y − 3) + (4x − y + 7)
   - Sort: (1x + 4x) + (2y + (−1y)) + ((−3) + 7).

   Answer: 5x + y + 4

6 A rectangle has sides $3x + 2$ and $x + 5$. Write its perimeter as a simplified expression.

- Perimeter is all four sides: $(3x + 2) + (x + 5) + (3x + 2) + (x + 5)$.
- Sort: $(3x + 1x + 3x + 1x) + (2 + 5 + 2 + 5)$.

Answer: $8x + 14$

7 Add $(0.5x + 1.5) + (2.5x - 0.5)$

- Sort: $(0.5x + 2.5x) + (1.5 + (-0.5))$.

Answer: $3x + 1$

8 Add $(2a + 3) + (a + 1) + (4a + 2)$

- Sort: $(2a + 1a + 4a) + (3 + 1 + 2)$.

Answer: $7a + 6$