Subtracting Expressions: Worked Answers

Each problem solved the way the lesson does it.

Name: _____ Date: _____

1. Subtract (8x + 5) − (3x + 2)
   - Flip every sign in the second group: 8x + 5 + (−3x) + (−2).
   - Sort: (8x + (−3x)) + (5 + (−2)).

   Answer: 5x + 3

2. Subtract (9y + 1) − (4y − 6)
   - 9y + 1 + (−4y) + 6.
   - Taking away −6 adds 6.

   Answer: 5y + 7

3. Subtract (2a − 7) − (5a + 3)
   - 2a + (−7) + (−5a) + (−3).

   Answer: −3a − 10

4. Subtract (6m − n) − (−2m + 4n)
   - 6m + (−1n) + 2m + (−4n).
   - Sort: (6m + 2m) + ((−1n) + (−4n)).

   Answer: 8m − 5n

5. Subtract (−3x + 4) − (−3x − 4)
   - (−3x) + 4 + 3x + 4.
   - The x terms cancel.

   Answer: 8

6. Simplify 15 − (2x − 9)
   - 15 + (−2x) + 9.

   Answer: −2x + 24

7 A pool costs 20x + 50 dollars at Store A and 15x + 80 dollars at Store B, for x hours of use. How much more does Store A cost?

- (20x + 50) − (15x + 80).
- 20x + 50 + (−15x) + (−80).

Answer: 5x − 30 dollars more

8 Simplify (4p + 1) − (p + 1) − (2p − 3)

- 4p + 1 + (−1p) + (−1) + (−2p) + 3.
- Sort: (4p + (−1p) + (−2p)) + (1 + (−1) + 3).

Answer: p + 3