Fractions Outside the Parentheses: Worked Answers

Each problem solved the way the lesson does it.

Name: _____ Date: _____

1. Expand 1/2(8x + 6)
   - Half of each term: 4x + 3.

   Answer: 4x + 3

2. Expand 1/3(6y − 9)
   - 1/3 × 6y + 1/3 × (−9).

   Answer: 2y − 3

3. Expand 2/3(9a + 12)
   - 9 ÷ 3 × 2 = 6, and 12 ÷ 3 × 2 = 8.

   Answer: 6a + 8

4. Expand 3/5(10m − 15)
   - 10 ÷ 5 × 3 = 6, and −15 ÷ 5 × 3 = −9.

   Answer: 6m − 9

5. Expand −1/4(8x − 12)
   - −1/4 × 8x + −1/4 × (−12).

   Answer: −2x + 3

6. Simplify 1/2(4x + 10) + 1/3(3x − 6)
   - Expand: 2x + 5 + 1x + (−2).

   Answer: 3x + 3

7. Expand 1/2(x + 4)
   - 1/2 × x + 1/2 × 4.

   Answer: 1/2 x + 2

8 What value of k makes $6x + k$ and $2(3x - 1.5) + 4$ equivalent?

- Expand: $6x + (-3) + 4 = 6x + 1$.
- Match the number parts.

Answer: $k = 1$