The Area Picture: Worked Answers

Each problem solved the way the lesson does it.

Name: _____ Date: _____

1. Expand 3(x + 7)
   - 3 × x + 3 × 7.

   Answer: 3x + 21

2. Expand 5(3y + 2)
   - 5 × 3y + 5 × 2.

   Answer: 15y + 10

3. Expand 2(6a + 5b)
   - 2 × 6a + 2 × 5b.

   Answer: 12a + 10b

4. Expand 4(x + 3y + 2)
   - 4 × x + 4 × 3y + 4 × 2.

   Answer: 4x + 12y + 8

5. Expand 8(2m + 1)
   - 8 × 2m + 8 × 1.

   Answer: 16m + 8

6. A rectangle is 6 units tall and 2x + 5 units wide. Write its area without parentheses.
   - Area is 6(2x + 5).
   - 6 × 2x + 6 × 5.

   Answer: 12x + 30 square units

7 Three friends each buy a ticket for t dollars and a 4 dollar drink. Write the total two ways.

- Each spends t + 4, so the total is 3(t + 4).
- Expand: 3t + 12.

Answer: 3(t + 4) or 3t + 12 dollars

8 Expand 10(a + b + c)

- 10 × a + 10 × b + 10 × c.

Answer: 10a + 10b + 10c