

Equivalent Expressions Practice

Part 1: Use the Distributive Property to **expand** each expression.

$$\begin{aligned}
 3(f + 2) &= 3 \cdot (f + 2) \\
 &= \underline{3 \cdot f} + \underline{3 \cdot 2} \\
 &= \underline{3f + 6}
 \end{aligned}$$

1. $3(4w + 5)$

= _____

2. $5(6 - 3y)$

= _____

3. $7(2a - 7)$

= _____

4. $9(3p + 5)$

= _____

5. $10(3 - 4d)$

= _____

6. $8(5r + 3)$

= _____

Part 2: Use the Distributive Property to **factor** each expression.

$$\begin{aligned}
 4y + 2 &= \underline{2} \cdot \underline{2y} + \underline{2} \cdot \underline{1} \\
 &= \underline{2(2y + 1)}
 \end{aligned}$$

7. $7y + 21$

= _____

8. $12 - 4k$

= _____

9. $18 - 12h$

= _____

10. $20w + 15$

= _____

11. $14 - 8x$

= _____

12. $24p - 15$

= _____

Part 3: Apply your understanding of **equivalent expressions** to solve the following problems.

1. State whether each pair of expressions are equivalent.

a. $8(3 - 5m)$ and $24 - 5m$ _____

b. $9(2k + 3)$ and $18k + 27$ _____

c. $3(7z - 4)$ and $12 - 21z$ _____