Name: _____

4-4 Additional Practice

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Leveled Practice **In 1–2, fill in the boxes to expand each expression.**

1. $3(t - 2)$

$= (3)\square + (3)\square$

$= \square + \square$

2. $0.2(y + 2)$

$= \square\, y + \square\,(2)$

$= \square + \square$

For 3–6, write the expanded form for each expression.

3. $2(y + 5x)$

4. $-\frac{1}{2}(y - x)$

5. $a(8 + 2b - 6)$

6. $-2.5(-3 + 4n + 8)$

7. Use the Distributive Property to expand the expression $y(9 - 0.2x)$.

8. Expand the expression $\frac{1}{2}(3 + 4t - 10)$

9. Which expression is equivalent to $\frac{1}{5}(15 + 10x - 5)$?

Ⓐ $2 + 2x$

Ⓑ $2 - 2x$

Ⓒ $-2 + 2x$

Ⓓ $-2 - 2x$

10. Higher Order Thinking A carpenter plans to extend the length of a rectangular desk by 7 feet. Let x represent the desk's original length. The expression $9(x + 7)$ represents the area of the desk's surface, where 9 is the width, in feet, and $(x + 7)$ represents the extended length, in feet, of the desk. The carpenter thinks that the area of the extended portion of the desk is 16 square feet.

Which choice below includes the expanded form of the area expression for the desk's surface and the correct area of the extended portion of the desk's surface?

Ⓐ $10x + 16$ and $10x$ square feet

Ⓑ $9x + 63$ and $9x$ square feet

Ⓒ $9x + 7$ and 7 square feet

Ⓓ $9x + 63$ and 63 square feet

11. Write the expanded form of $h(3k - 12.4)$.

12. Use the Distributive Property to write an expression that is equivalent to $2.5(-10 + 3\frac{3}{4}x - 6.2)$.

Assessment Practice

13. An architect plans to build an extension for a rectangular bedroom. The bedroom is 5 meters wide, and the original length of the bedroom is 8 meters. The length of the bedroom's extension, in meters, is represented by x. The expression $5(x + 8)$ represents the area, in square meters, of the bedroom.

PART A

Which expression is equivalent to $5(x + 8)$?

Ⓐ $6x + 13$

Ⓑ $5x + 40$

Ⓒ $5x + 8$

Ⓓ $x + 40$

PART B

What does each term of the expanded expression represent?