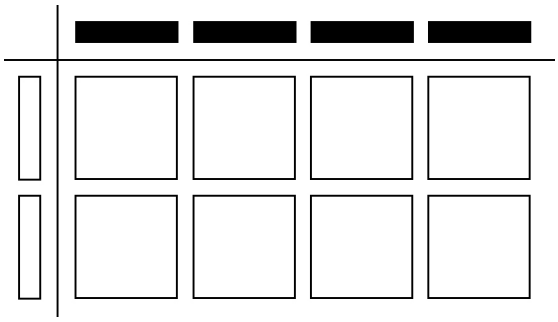
Name: _____ Date: _____

BLM 7–11

Chapter 7 Test

For #1 to #4, select the best answer.

1. Which monomial multiplication equation is modelled by the algebra tiles?



A $(-2x)(4x) = -8x^2$ **B** $(-2x)(4x) = 8x^2$
C $(-2x)(4y) = -8xy$ **D** $(-2x)(-4y) = 8xy$

2. Four students were asked to determine the quotient of the expression $\frac{16x^2}{4x}$.

Which student showed a correct partial solution?

A Amir: $(16 \div 4) + (x^2 \div x)$ **B** Brendan: $(16 \div 4) \div (x^2 \div x)$
C Christina: $(16 - 4) \div (x^2 - x)$ **D** Dana: $(16 \div 4) \times (x^2 \div x)$

3. Leah simplified the expression $\frac{21x^2 + 14x}{7x}$. Which of the following classifications describes the quotient?

A monomial **B** binomial
C trinomial **D** constant

4. Which of the equations best shows the use of the distributive property?

A $3(4x + 2x) = 3(6x)$ **B** $5(2 - 3x) = 5(-3x + 2)$
C $2(-x + 4) = (-x + 4)2$ **D** $4(2x - 7) = (4)(2x) + (4)(-7)$

Complete the statements in #5 to 7.

5. The product $(-3.7x)(5.1y)$, in simplified form, is _____.

6. The quotient $10x^2 \div 4x$, in simplified decimal form, is _____.

7. Multiplying the polynomial $\frac{4}{5}x - 6$ by $5x$ produces the expression _____.

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(continued)

Short Answer

8. Write each product in simplified form.

a) $(5x)(3x)$ **b)** $(-4x + 5)(-2y)$

9. Write each product in simplified form.

a) $\frac{27x^2}{3x}$ **b)** $\frac{16x - 4x^2}{-2x}$

10. Use a model to determine the product of $2x - 1$ and $-2x$.

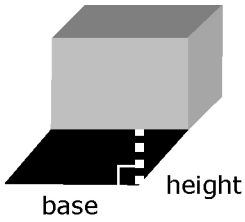
11. Sergio wanted to determine $5x(7x - 2)$. His solution is shown below.

$(5x)(7x) + (5x)(-2)$ Step 1
$= (5)(7)(x)(x) + (5)(-2)(x)(-2)$ Step 2
$= 35x^2 - 10(-2x)$ Step 3
$= x\ 35x^2 + 20x$ Step 4

Sergio discovered an error in his solution.

In which step did Sergio make the error? Show the correct solution.

12. The area of a parallelogram can be calculated by multiplying the base by the height. The area of the shadow can be represented by the expression $(12x^2 + 3x)$ cm^2. The base of the box can be represented by the expression $3x$ cm. What is the expression, in simplified form, for the height of the shadow?



Extended Response

13. The area of Rectangle *B* is three times the area of Rectangle *A*. Provide each of your answers in simplified form.

a) Write an expression to represent the area of Rectangle A.

b) Determine an expression for the area of rectangle *B*.

c) If the width of Rectangle B can be represented by $12x$, what is an expression for the length of Rectangle B?