Algebra 1 Name_____

Practice Test: Multiplying and Factoring Polynomials

YOU MUST SHOW ALL YOUR WORK TO RECEIVE CREDIT!

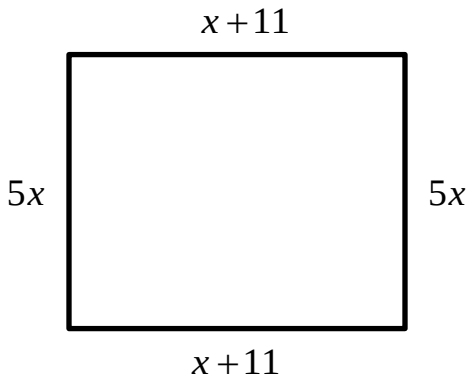
1. Find the product $(3x-7)(2x+5)$. 1._____

A. $5x^2 + x - 35$ B. $6x^2 + x - 35$

C. $6x^2 + x - 12$ D. $6x^2 - 29x - 35$

2. Expand and simplify: $(x+7)^2$. 2._____

3. What is the perimeter of the figure shown below, which is not drawn to scale?



Part 1: Write an expression that could be used to represent the perimeter of the rectangle above.

Part 2: Simplify the expression you found in Part 1.

4. Factor $4x^5 - 32x^3$ completely. 4._____

A. $4x(x^4 - 8x^2)$ B. $4x^3(x-8)$

C. $4x^3(x^2 - 8)$ D. $x^3(4x^2 - 32)$

5. Identify the method you would use to factor.

a. $3x^5 - 15x^3$ _____

b. $25x^2 - 81$ _____

6. Factor $36x^2 - 121$ completely. 6._____

7. If $f(x) = 5x^3 - 2x + 7$ and $g(x) = 3x - 4$, write an equivalent form of $f(x) - g(x)$.

8. In the answer column, list the correctly factored steps of $8x^2 - 26x - 7$ by their letter.

A. 1, 56
2, 28
4, 14
7, 8

B. $(2x - 7)(4x + 1)$

C. ____ · ____ $= -56x^2$
____ +____ $= -26x$

D. $(8x^2 - 28x)(+2x - 7)$

E. $-28x \cdot +2x = -56x^2$
$-28x + +2x = -26x$

F. $8x^2 - 28x + 2x - 7$

G. $4x(2x - 7) + 1(2x - 7)$

Answer Column

_____ _____

_____

_____

_____

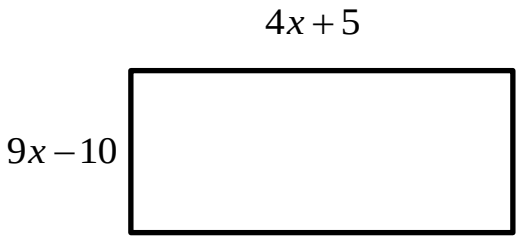
_____

_____

9. Factor $15x^2 + 2x - 8$. 9._____

10. Explain the steps you used to factor the trinomial from #9.

11.



The length of the rectangle is $4x + 5$ and the width is $9x - 10$.

Part 1: Write an expression that could be used to represent the area of the rectangle above.

Part 2: Simplify the expression you found in Part 1.