

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Class: \_\_\_\_\_

Algebra  
Unit 7  
PS

1) [3] Simplify:  $(x - 2)(4 - 3x) - (2x + 7)(x^2 - 3x + 8)$

2) [4] Simplify:  $(2x - 5)^3 + (4 - 3x)(7 - 5x - x^2)$

3) [2] If a rectangle has a width of  $x + 2$  and a length of  $2x - 7$ , what expression could be used to find its area?

4) [2] If the area of a triangle is represented by  $4x^2 - 8x + 10$  what would the area of a new triangle be if its area was  $5x$  less than  $\frac{1}{4}$  of the area of the original triangle?

5) [2] Simplify:  $3x^2y(2x - 3y)$

6) [4] Simplify:  $(4x^2 - 7x + 10)(14 - 8x - 5x^2)$

7) [2] Find the GCF between  $14x^2y$ ,  $21xy^2$ , and  $28y$

8) [2] Find two factors of -588 that add to -28.

9) [3] If the area of a rectangle is represented by  $10x^2 - 15x$  explain what could represent the length and width of this rectangle.

10) [3] Factor:  $4x^2 - 9y^2$

11) [3] Factor:  $x^2 - 18x + 80$

12) [3] Factor:  $2x^2 + 72x + 640$

13) [3] Factor:  $x^3 - 19x^2 - 120x$

14) [3] Factor:  $2x^4 + 64x^3 - 738x$

15) [4] Factor:  $12x^2 + 7x - 10$

16) [4] Factor:  $3x^2 + 33x + 54$

17) [4] Factor:  $30x^3 - 86x^2 + 54$