

Algebra 1  
Unit 7 Worksheet 2

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Period: \_\_\_\_\_

Directions: Please answer the following questions. **Show work!!**

Factor completely.

1.  $x^2 - 9x - 52$

2.  $2a^2 + 2a - 84$

3.  $3x^3y - 12xy$

4.  $3m^2 + 5m - 12$

5.  $2z^2 - 50$

6.  $d^2 + 24d + 144$

Simplify the following. NO DECIMALS!

7.  $\sqrt{169x^9y^2z^5}$

8.  $\sqrt[3]{448}$

9.  $\sqrt[5]{r^{11}s^{50}t^{24}}$

Simplify the polynomials. Pay attention to which operation to use.

10.  $(7x - 1)(5x - 9)$

12.  $(5x + 2)^2$

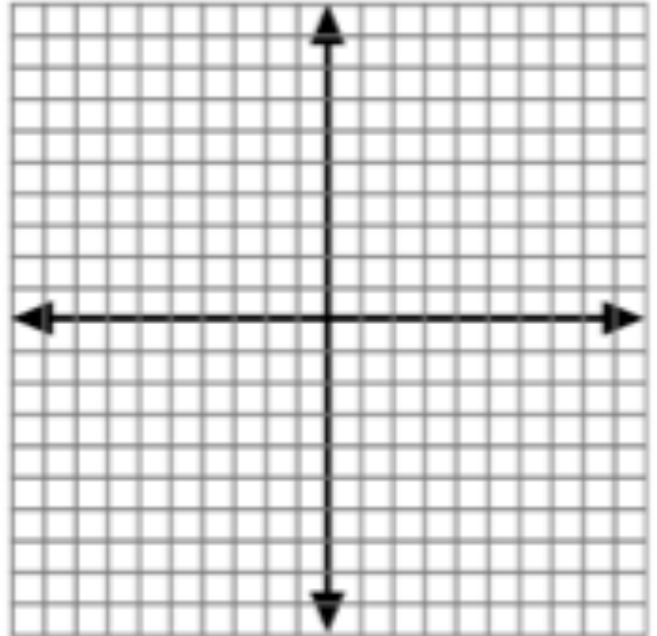
13.  $(y^5 - 4y^3 + 12y - 20) + (5y^2 - 17y + 3)$

14.  $(x^2 + 10x - 13) - (2x^2 - 11x + 5)$

15.  $(x - 5)(3x^2 + 7x + 1)$

16.  $35 - 9y + 3y^5 + 10y^2 - 6y + 4$

Graph the following quadratic function. Identify the axis of symmetry, vertex, y-intercept, domain and range.  
17.  $f(x) = x^2 - 4x - 5$



Axis of Symmetry:

Vertex:

y-intercept:

Domain:

Range: