## Math 114 Assignment 1

If you need more space, use your paper and staple this sheet first. Do not crowd your work and show all work downward. All exponents positive. \*Simplify completely:

1) 7 - 4[3 - (4y - 5)] 2) 20 + 1 - 
$$\sqrt{10^2 - (5+1)^2}$$
 (-2)

3) 
$$\frac{2(-2)-4(-3)}{5-8}$$
 4)  $\frac{15x^9}{3x^4}$ 

5) 
$$(-2y^{10})(-10y^2)$$
 6)  $\left(\frac{-2a^{-4}c^3d^{-1}}{3a^{-2}c^{-5}d^{-2}}\right)$ 

Solve the equation: 7) 3(x-2) + 7 = 2(x+5)

8) 
$$\frac{x+3}{6} = \frac{2}{3} + \frac{x-5}{4}$$

9)  $(x+7)^2 = 9$ 10)  $5y^2 = 20$ 

11) 
$$2x^2 + 3x - 5 = 0$$
 12)  $2(x + 2)^2 = 16$ 

Solve the inequality and graph the solution set on the number line 13) 8x + 3 > 3(2x + 1) + x + 514) -3[7y - (2y - 3)] > -2(1 + y)

Factor completely 15)  $x^3 - 16x$ 

16)  $32y^2 - 48y + 18$ 

17)  $16y^2 - 4y - 2$  18)  $5y^3 - 45y^2 + 70y$ 

Write the equation of the line in standard form that satisfies the following conditions: 19) Passes through the points, (4, -8) and (8, -3)

20) Passes through (-1, 3) and is parallel to the line whose equation is 3x - 2y = 5

Graph the following. One square = one unit.

21) 
$$5x + 3y = 15$$

22) 
$$y = \frac{3}{4}x - 3$$



