BECA / Dr. Huson / Geometry 01-Measurement Name:
pset ID: 1

**1-2HW-Alg2-graphing-review**

1. $2x^2 + 13x - 12 - 2x^2 - 3x + 5$

2. $3(a^2 - 2a + 7) - 2(a^2 - 3a - 10)$

3. $(a + 7)(3a - 1)$

Solve for the value of $x$.

4. $-9 = \frac{3}{4}x$

5. $\frac{2}{3}(3x - 6) = -2x$

What is the slope and $y$-intercept of each equation?

6.

7. $y = -3.4x - 1.8$

8. $5x + 2y = 8$

9. Use pencil for graphs. Label each function with its name or equation.

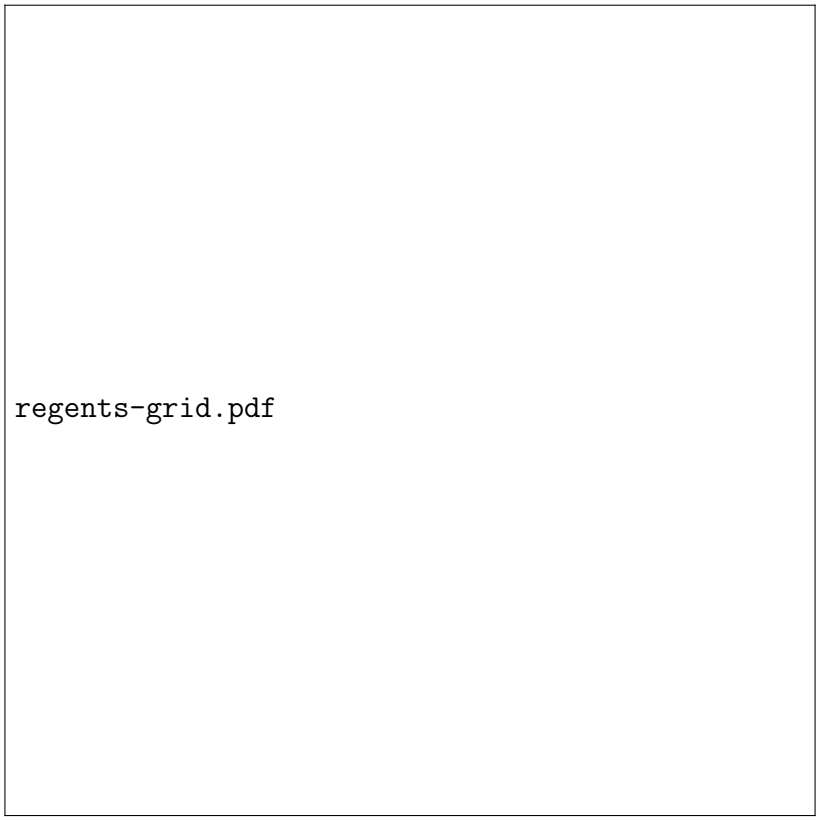
10. Given the function $f(x) = \frac{2}{5}x - 5$.

    (a) Draw the function $f(x)$ on the graph below.

    (b) Mark and label the point $P(3, 2)$ on the graph.

    (c) A second line, $g(x)$, is perpendicular to $f(x)$ and passes through point $P$. Plot $g(x)$ on the graph.

    (d) Challenge: what is the exact value of the $y$-intercept of $g(x)$?



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11. Explain why the radical $\sqrt[3]{5^2}$ is equivalent to $25^{\frac{1}{3}}$, an expression with a rational exponent.

12. Solve the system of equations by graphing. Select a point in the solution set and label it on the graph as ordered pair.

$$x + 4y \geq -8$$
$$y < \frac{1}{2}x - 4$$

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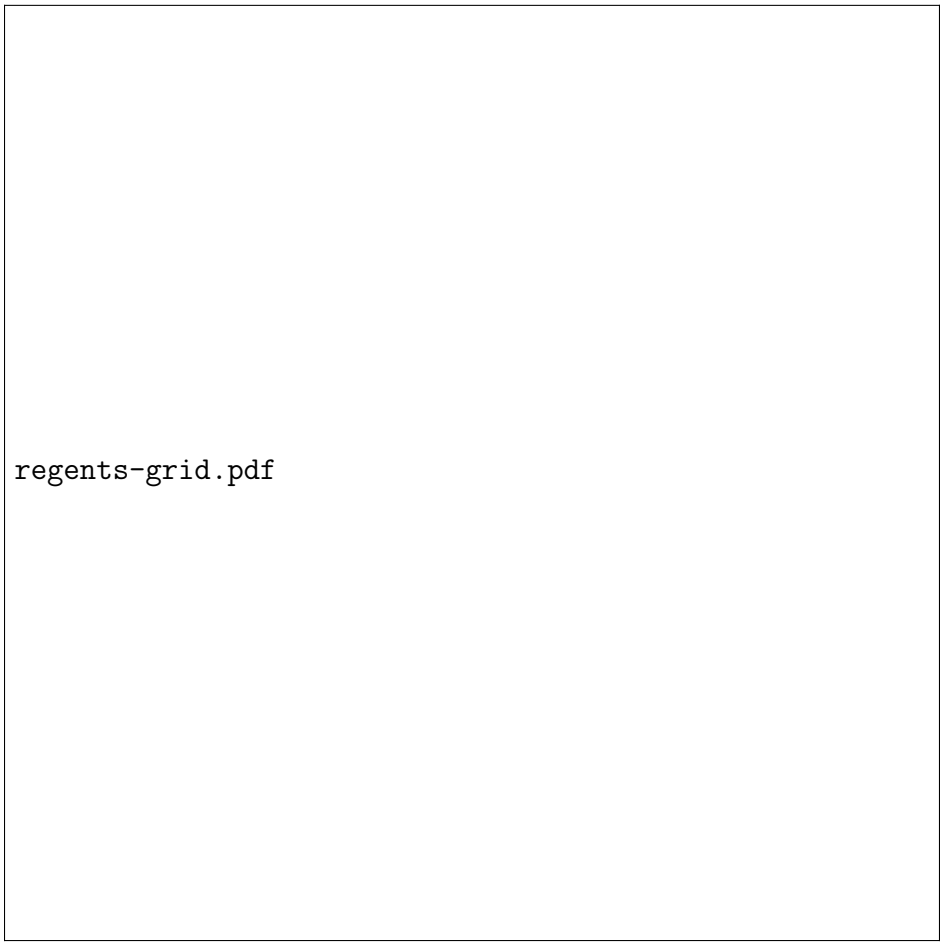
13. Graph the function $f(x) = x^2 - x - 12$ over the domain $-4 \leq x \leq 5$. Label the intercepts, axis of symmetry (with its equation), and the vertex as an coordinate pair.




Solve the system algebraically.

14.

15. $3x + 4y = 15$
$3x + y = 3$