Name: _____   Algebra - Homework Week 26

1. Solve and graph the inequality. $-1 - 6(6n - 5) < 7(-4n + 8) + 5$

2. Find the domain and range of the following.

x	−4	−2	0	2	3	4	6
h(x)	41	17	1	−7	−8	−7	1

3. Write the equation in both slope-intercept and standard form for a line passing through (5, -4) and perpendicular to $5x - 2y = 10$.

4. Solve the system of equations using any method.
$-5x - 4y = 23$
$-2x + 9y = -12$

5. Write and solve a system of equations for the given situation.
Unleaded gas and diesel sell for different prices per liter. Matt buys 2 liters of unleaded gas and 3 liters of diesel for a total of $2.52. Mark buys 5 liters of unleaded gas and 4 liters of diesel for a total of $4.48. How much is each type of fuel per liter?

6. Simplify.
$$\frac{2yx^2}{2x^0 \cdot (x^0 y^0)^2}$$
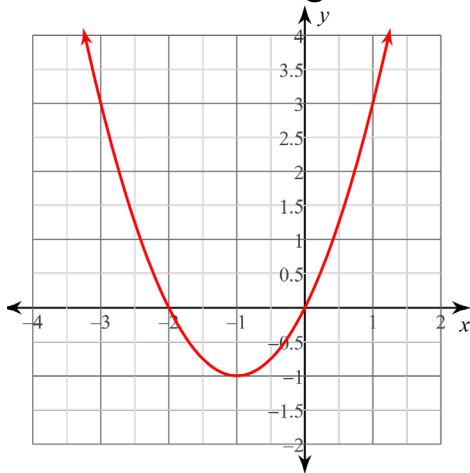
7. Factor as completely as possible. $24x^2 + 20x - 24$

8. Write a verbal description of how this equation is different from the quadratic parent function. $y = -3(x + 2)^2 - 5$
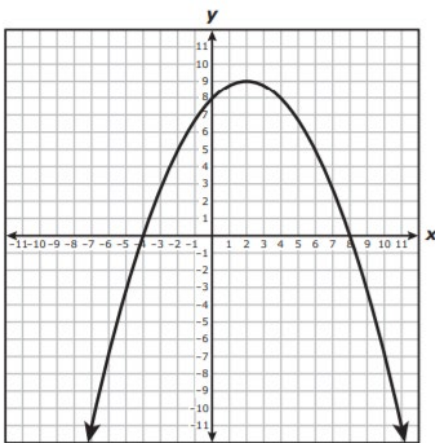
Use the griddables to answer the following questions.
9. What is the negative root of the equation graphed below?

10. The graph of a quadratic function $g(x)$ is given below. The coordinates of the x-intercepts, the y-intercept, and the vertex are integers. What is the maximum value of g?