Chapter 9 Review

A: Simplify

1. $\sqrt{242d^7}$	**2.** $\sqrt[3]{128g^6h^9}$	**Things to Remember:**
3. $\sqrt[3]{\frac{125}{64}}$	**4.** $5\sqrt{6}+3\sqrt{7}-2\sqrt{6}$	
5. $\sqrt{27}+3\sqrt{12}-2\sqrt{3}$	**6.** $\frac{2\sqrt{2}}{\sqrt{5}}$	
7. $\left(\sqrt{11}-3\right)^2$	**8.** $\left(10-\sqrt{3}\right)\left(10+\sqrt{3}\right)$	

B: Solve the Quadratic equation using <u>square roots.</u> Write your answer in simplest radical form if needed.

1. $12x^2=300$	**2.** $3x^2-8=100$	**Things to remember:**
3. $3\left(2x-5\right)^2=12$	**4.** $\left(x+7\right)^2-1=4$	

C: Solve the equation by completing the square. If needed, write your answer in simplest radical form.

1. $x^2 - 8x = -12$	**2.** $x^2 + 10x + 21 = 0$	**Things to remember:**
3. $x^2 + 2x - 5 = 0$		

D: Solve the equation by using the quadratic formula. If needed, write your answer in simplest radical form.

1. $5x^2 + 6x + 1 = 0$	**2.** $3x^2 - 2x + 2 = 0$	**Things to remember:**
3. $4x^2 - 12x + 9 = 0$		

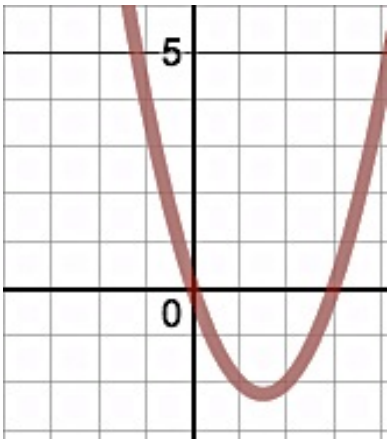
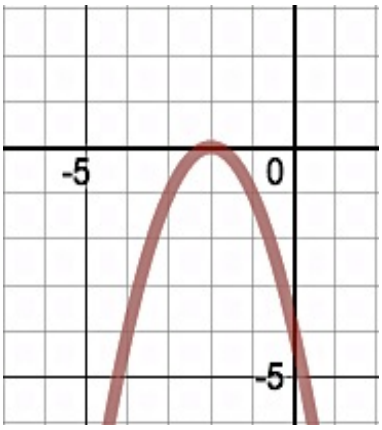
E: Word problems

1. Maggie shot a golf ball from a platform 10 ft high at an upward velocity of 70 feet per second. How long will it take for the ball to reach the ground? Use $h_t = -16t^2 + v_0 t + h_0$	**Things to remember**
2. Stefan releases a water balloon from the top of a 22 ft ledge. How long will it take for the balloon to reach the ground? $h_t = -16t^2 + h_0$	

F: Word problems.

3. The length of a rectangle is 4 less than twice the width. The area of the rectangle is 70 ft^2. What are the dimensions of the rectangle	**Things to remember**

G. Miscellaneous.

1. Determine the solutions to the graph. 	2. Determine the solutions to the graph. 	**Things to remember**
3. How many x-intercepts does the function $f(x) = x^2 + 8x - 3$ have?	4. A quadratic equation can have a <u>maximum</u> of _____ solutions.	