Algebra 2 Honors- Week 8 Homework

**Monday-**

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**Tuesday-**

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**Wednesday-** Quiz! No homework, catch up from previous week if needed!

**Thursday-**

**Factoring Completely Assignment**

Factor completely.

1. $b^{4}+4b^{2}+4$ 2. $2x^{2}-14x+24$ 3. $4a^{6}+4$ 4. $24m^{4}+10m^{3}-4m^{2}$

5$. 4z^{4}-7x^{2}-15$ 6. $x^{3}-3x^{2}-4x+12$ 7. $h^{4}-5h^{2}-1$ 8. $w^{8}-1$

9. $\left(y-3\right)^{2}-4$ 10. $\left(x+5\right)^{2}+7\left(x+5\right)+6$

**Friday-**

**Modeling Equations and Functions with Factoring Assignment**

Solve each problem.

1. $b^{2}+7b+6=0$ 2. $x^{2}-16=0$ 3. $2y^{2}-6=y$ 4. $m^{2}=25$

5$. t^{3}-t^{2}=0$ 6. $(p-6)^{2}=p$ 7. $m^{3}+6m^{2}=27m$ 8. $d^{4}-2d^{2}+1=0$

9. The width of a rectangle is 10 less than its length.

a) Write a function A(x) that represents the area give length x.

b) Find the area of the rectangle if it has a length of 15 inches.

c) Find the length and width if the area is 24 inches2.

10. A ball is shot straight up from a height of 112 feet and at a rate of 96 feet per second.

a) Write a function H(t) that represents the height at t seconds.

b) Find the height of the ball at 2 seconds.

c) When will the ball hit the ground?