Unit 6 General Review

For problems 1 - 4, a builder is making a rectangular garden. Write a quadratic function, *A(w),* that represents each area as a function of the width, *w*. If an area is to be enclosed on three sides, one length does not have fencing.

1) Enclosed on three sides; 420 feet of fencing.

2) Enclosed on four sides; 60 feet of fencing.

3) Enclosed on four sides; 516 feet of fencing

4) Enclosed on three sides; 128 feet of fencing.

For problems 5 – 7, you are given the initial velocity and initial height of a projectile. Write a function *h(t)* for the height of the object after *t* seconds.

5) initial height = 85 feet
initial velocity = 72 ft/sec

6) initial velocity = 50 ft/sec
initial height = 90 feet

7) initial height = 23 feet
initial velocity = 30 ft/sec

8) A parabola opens downward and has a vertex at (-4, -5). Write a function, *f(x)*, of the parabola in vertex form.

9) A parabola opens upward and has x-intercepts at (-5, 0) and (-12, 0). Write a function, *f(x)*, of the parabola in factored form.