

Comments on Quadratic Models

Quadratic models (as we are going to do them) can usually be broken down into three types.

1. Maximum/Minimum Problems: Any time we are trying to find the highest or lowest value in a quadratic model, we are looking for the vertex.
2. Places where the value of the equation is "0": These are when we have a height function, for example, and we want to know where the height is zero. Also, problems dealing with area of rectangular shapes are this type as well. For this, either factor or use the quadratic formula.
3. Finding values at certain points: For these, just plug in the "x" value, if that's what we know, and solve for "f(x)" (or "y"). If what we know is the "f(x)" value, then we're going to have to get our equation in $ax^2+bx+c=0$ form and use #2 above.

*Keep in mind that for problems where we have $h(t) = -16t^2 + v_0t + h_0$, $t = 0$ is **when we are starting**. (In other words, time is zero.) When $h(t) = 0$, that's when our object hits the ground (or the river, etc.).