

8. [12 points] Top Norwegian skier, Wallace, is participating in the ski jumping world championship. During his practice jump, his height (in meters) above his landing spot on the ground t seconds after going airborne is given by $h = A(t) = -4.9t^2 + 15t + 60$.

Throughout this problem include **units**, and express your answers in **exact form** or round your answers to **three decimal places**. Be sure show all the steps needed to get your answers, and **circle** your final answer. Answers with no work shown will not receive credit.

- a. [2 points] How high above his landing spot was Wallace when he first went airborne?

- b. [4 points] At what time t does Wallace land on the ground?

- c. [6 points] A daredevil skier, V, did a stunt jump with a jetpack on their back. Suppose that the quadratic function $B(t)$ gives V's height (in meters) above their landing spot t seconds after going airborne. From the reports, it was gathered that V's jump lasted 8 seconds, that they jumped from a height of 48 meters above ground, and that they reached maximum height 3 seconds after they went airborne. Find a formula for $B(t)$.