

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

**A pair of model rockets are launched at the exact same moment. One is launched from the ground with an initial velocity of 128 ft/s. Therefore it's height could be modeled by the equation  $y = -32x^2 + 128x$ . The second is launched from a platform 20ft above the ground with an initial velocity of 96 ft/s. Thus, it's height could be modeled by the equation  $y = -32x^2 + 96x + 20$ . Which rocket will land first and how much longer will it take for the second to land?**

What solution(s) did you find?

Does it/do they makes sense in the context of the problem? What does it mean?

What type(s) of solution where you expecting? Think number systems.

Which method(s) for solving quadratic equations did you choose?

Why? Do you think this was the best method?

Show all of your work (neatly).