Two friends, Adam and Alyssa, are members of model rocket clubs at their schools. Each of their schools is having a competition to see whose model rocket can stay in the air the longest. The science teachers in each school have helped the students construct equations that describe the height of the rocket from the ground when it has been launched from the roof of the school.

Following are Adam’s and Alyssa’s equations:

Adam: \( h = -16t^2 + 40t + 56 \) where \( t \) is measured in seconds and \( h \) is measured in feet.

Alyssa: \( h = -5t^2 + 15t + 18 \) where \( t \) is measured in seconds and \( h \) is measured in meters.

- Use a graph to determine whose rocket stays in the air the longest. Explain how you used the graph to answer the question.

- Explain how to find the x-intercepts of any quadratic function by graphing. In general, what do the x-intercepts of a quadratic function mean? How many x-intercepts can a quadratic function have?