Example 7: h = 16t^2 + 72t + 520

Suppose a particular "star" is projected from a firework at a starting height of 520 feet with an initial upward velocity of 72 ft/sec.

The equation:

h = 16t^2 + 72t + 520

gives the star's height h in feet at time t in seconds.

a) How long will it take for the star to reach its maximum height?

b) What is the maximum height?