

Pop Balloon



Maria tossed a water balloon in the air.

This situation can be represented by the equation:

$$y = -x^2 + 6x$$

Her brother tossed a dart at the water balloon.

This situation can be represented by the equation:

$$y = 2x$$

1. If x is time in seconds, and y is distance from the ground in feet, when would the dart hit the balloon, assuming both were tossed at the same time from the same place?

2. What is the height of the balloon and dart when they meet?