

3. A rectangular poster is 12 inches by 4 inches and is surrounded by a frame of uniform width. If the area of the photo and the frame is 180 square inches, find the width of the frame.

4. A model rocket launcher is launched from the roof of a building. Its flight path is modeled by $h = -5t^2 + 30t + 10$ where h is the height of the rocket above the ground in meters and t is the time after the launch in seconds.

a. From what height was the rocket launched from?

b. When does the rocket hit its maximum height?

c. What is the rockets maximum height?

d. How high is the rocket after 1 second?

e. How long before the rocket hits the ground?