Math 1513 - College Algebra

Written Assignment 3 - Due 2012.06.23

Directions: Please answer the following question in complete sentences. Be sure to label all geometric objects in any illustrations. I will accept an answer in a scanned image format, in a Word document or as a pdf.

Question: A rectangular canvas is to contain a small painting with an area of 52 in^2, and requires 2 inch margins on the left and right, with one inch margins on the top and bottom for framing. The total area of such a canvas is given by the formula

$$A = \frac{4x^2 + 60x + 104}{x}$$

where x is the height of the *painted* area.

1. What is the area A of the canvas if the height of the painting is $x = 10$ inches?
2. If the area of the canvas is $A = 102$ in^2, what are the dimensions of the painted area?