

# Math 1513 - College Algebra

## Written Assignment 3 - Due 2015.06.21

---

Directions: Please answer the following question in complete sentences. Be sure to label all geometric objects in any illustrations (if any). I will accept an answer in a scanned image format, as a pdf, or as a picture taken and sent from your awesome smart phone.

Question: A rectangular canvas is to contain a small painting with an area of  $52 \text{ in}^2$ , 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  $A = 102 \text{ in}^2$ , what are the dimensions of the painted area?