

p. 298. #10 (3.7)

a) Zeros: -1 and 7
Point on the Graph: (3, 5)

Given

Todo: Write equation in Standard Form.

$$\textcircled{51} \quad y = a(x - s)(x - t)$$
$$y = a(x + 1)(x - 7)$$

52.

$$y = a(x+1)(x-7)$$

Solve for "a" using (3, 5).

$$5 = a(3+1)(3-7)$$

$$5 = a(4)(-4)$$

$$5 = -16a$$

$$a = \frac{-5}{16}$$

53

$$y = a(x+1)(x-7)$$

$$a = \frac{-5}{16}$$

U. 4
4. 5

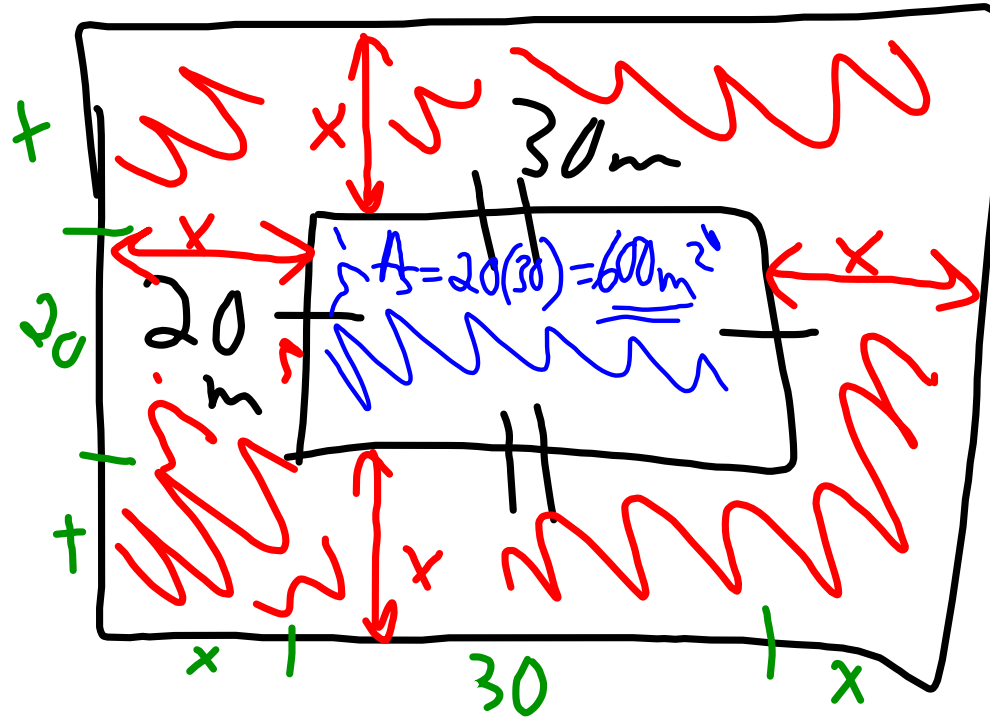
$$y = \frac{-5}{16}(x+1)(x-7)$$

$$y = \frac{-5}{16}(x^2 - 6x - 7)$$

$$y = \frac{-5x^2}{16} + \frac{30x}{16} + \frac{35}{16}$$

$$y = \frac{-5x^2}{16} + \frac{15x}{8} + \frac{35}{16}$$

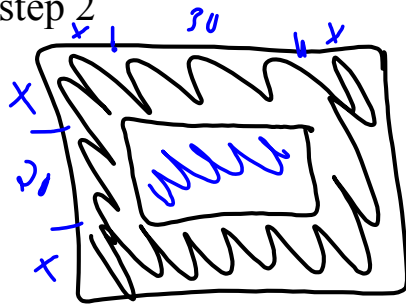
p. 316 #10 (3.9)



step 1

$$\frac{\$6000}{\$10/\text{m}^2} = 600 \text{ m}^2 = \text{Area}$$

step 2



$$w = 20 + 2x$$

$$l = 30 + 2x$$

$$A = lw$$

$$A = (20 + 2x)(30 + 2x)$$

$$A_S = 20(30) = 600 \text{ m}^2$$

$$A_{SH} = 600 \text{ m}^2$$

$$* A_L = 1200 = (20 + 2x)(30 + 2x)$$

Step 1
↓
nuts!

$$A_L - A_S = A_{SH}$$

$$A_L - 600 = 600$$

$$A_L = 600 + 600$$

$$A_L = 1200 \text{ m}^2$$

step 3

$$4x^2 + 100x + 600 = 1200$$
$$4x^2 + 100x - 600 = 0$$

$$4(x^2 + 25x - \frac{150}{30}) = 0$$

$$4(x + 30)(x - 5) = 0$$

~~$x = -30$~~

OR $x = 5$ roots?

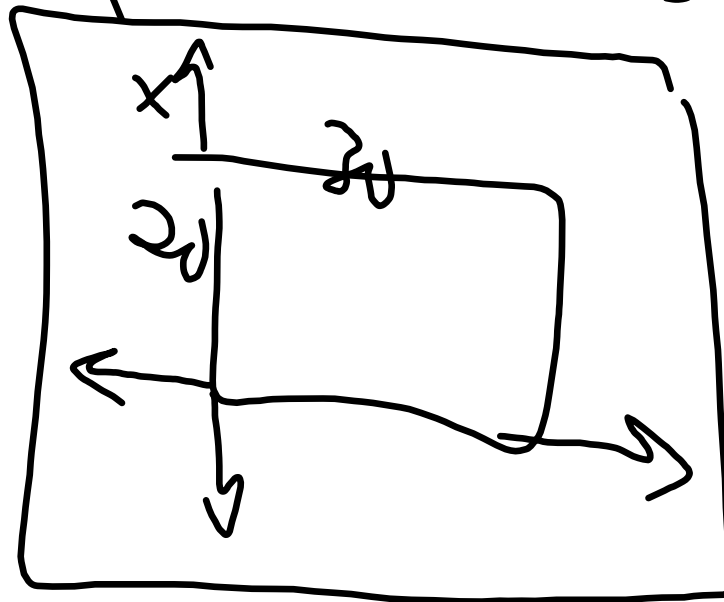
step 4

Context? width in metres!

uniform width = 5m.

$\therefore l = 40\text{m}$ and $w = 30\text{m}$.

the
width
is
5 metres
wide.



these are
outside
dimensions.

p.317 #13 (3.9)

$$b) H = 10 = 15 + \cancel{23t}^{24t} - 5t^2$$

$$0 = -5t^2 + \cancel{23t}^{24t} + 5$$

$+5t \rightarrow 5 = 25t$
 $-t \rightarrow 1 = -t$

$$0 = (5t + 1)(-t + 5)$$

$$\cancel{5t + 1 = 0}$$

$$\cancel{t = -\frac{1}{5}}$$

and $-t + 5 = 0$

$$-t = -5$$

$$t = 5$$

