

5. [6 points] Let

$$F(x) = \frac{(x^2 - 4x + 4)x}{x(x - 100)(10x - 2)}$$

i) Does the graph of  $y = F(x)$  have any vertical asymptotes? If so, write their equations, otherwise write None.

*Solution:* Equations of vertical asymptotes:  $x = 100$ ,  $x = 0.2$

ii) Does the graph of  $y = F(x)$  have any horizontal asymptotes? If so, write their equations, otherwise write None

*Solution:*  $y = \frac{1}{10}$

iii) Find the zeros of the function  $F(x)$ . If the function does not have zeros, write None.

*Solution:*  $x = 2$