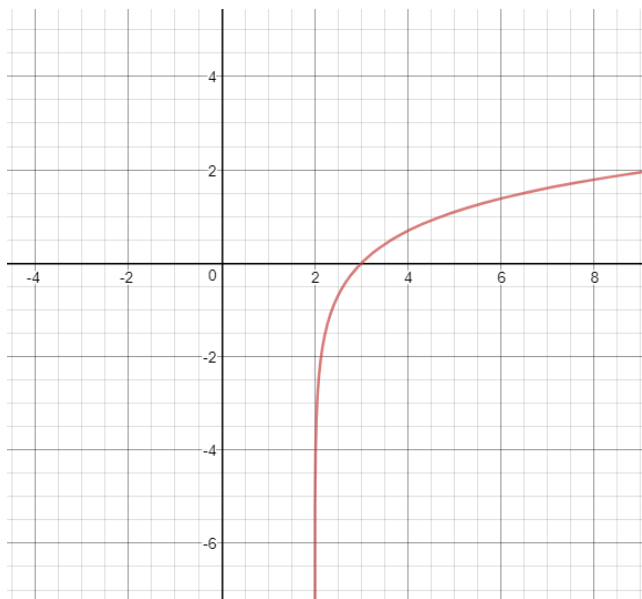


1b) $f(x) = \ln(x-2)$



$$\lim_{x \rightarrow \infty} f(x) = +\infty$$

$$\lim_{x \rightarrow 2^+} f(x) = -\infty$$

2b) $\ln x + \frac{1}{2} \ln(x^2 + 5)$

2c) $\frac{1}{2} \ln(x-1) - \frac{1}{2} \ln x$

3b) $\frac{800}{50} = 100 - e^{x/2}$

$$84 = e^{x/2}$$

$$\ln 84 = \frac{x}{2}$$

$$x = 2 \ln 84 \approx 8.862$$

3c) $(3-z) \ln 2 = \ln 625$

$$3-z = \frac{\ln 625}{\ln 2}$$

$$z = 3 - \frac{\ln 625}{\ln 2} \approx -6.288$$

4b) $x-3 = e^2$

$$x = 3 + e^2 \approx 10.389$$

4c) $x-1 = 2^5 = 32$

$$x = 33$$