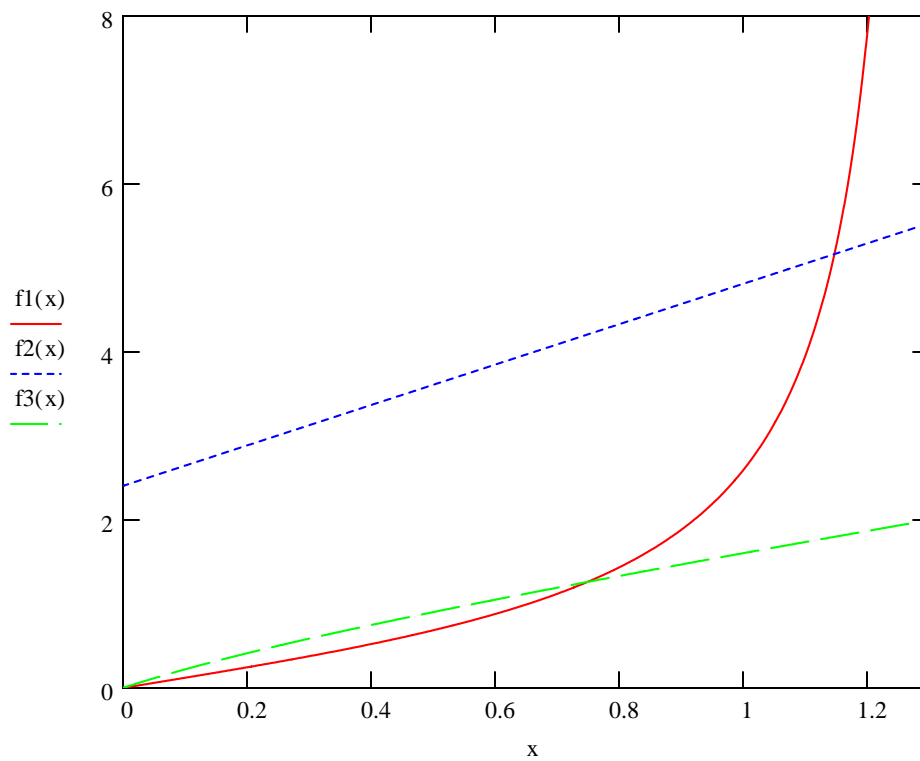


PROBLEM 3

$$\kappa := \frac{2.405}{2} \quad \frac{\pi}{2 \cdot \kappa} = 1.306$$

$$f1(x) := \tan(\kappa \cdot x) \quad f2(x) := 2 \cdot \kappa \cdot (x + 1) \quad f3(x) := 2 \cdot \kappa \cdot \frac{x}{1 + \frac{x}{x + 1}}$$



$$g2(x) := f1(x) - f2(x)$$

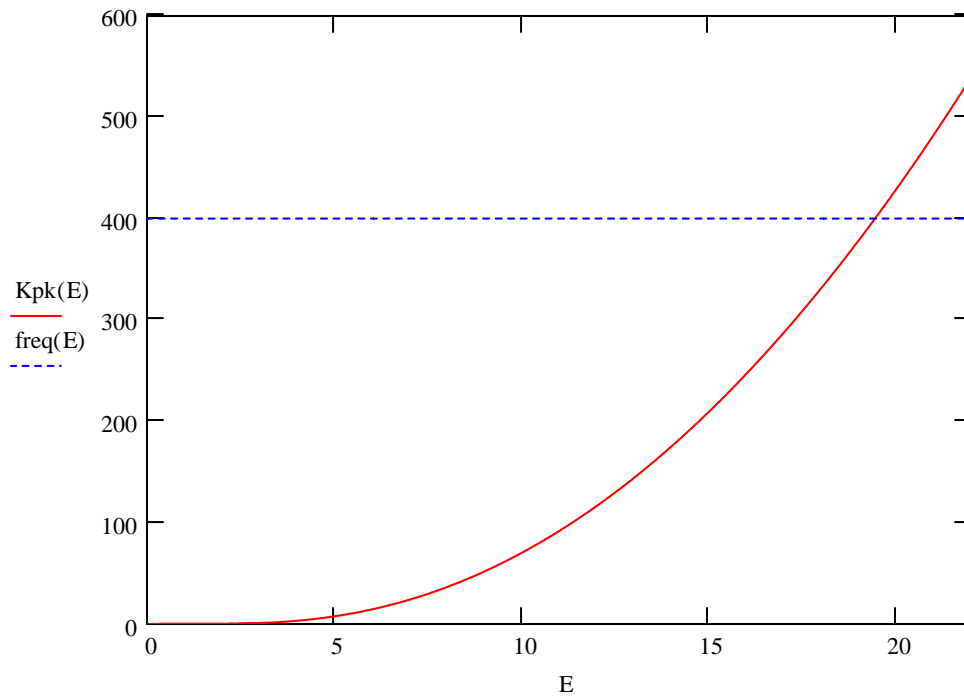
$$g3(x) := f1(x) - f3(x)$$

$$g2(1.14721) = 8.43 \times 10^{-5}$$

$$g3(0.7486) = -1.79 \times 10^{-5}$$

PROBLEM 4

$$Kpk(E) := 1.64 \cdot E^2 \cdot e^{\frac{-8.5}{E}} \quad \text{freq}(E) := 400$$



$$KfDiff(E) := Kpk(E) - \text{freq}(E)$$

$$KfDiff(19.4346) = -9.051 \times 10^{-3}$$