

 $\frac{1}{100} \lim_{x\to\infty} \frac{6\sqrt{x} + 5 + \frac{4}{\sqrt{x}}}{\sqrt{x}} = \lim_{x\to\infty} \frac{\sqrt{x} \left(6 + \frac{5}{\sqrt{x}} + \frac{4}{\sqrt{x}}\right)}{\sqrt{x} \left(3 + \frac{e^{-2x}}{\sqrt{x}} + \frac{1}{\sqrt{x^2}}\right) \lim_{x\to\infty} \frac{6 + \frac{5}{\sqrt{x}} + \frac{4}{\sqrt{x}}}{\sqrt{x} + \frac{e^{-2x}}{\sqrt{x}}} = \lim_{x\to\infty} \frac{1}{\sqrt{x} + \frac{e^{-2x}}{\sqrt{x}}} = \lim_{x\to\infty} \frac{1}{\sqrt{x}} = \lim_{x\to\infty} \frac{1}{\sqrt{x}$ ==== L A22/a) f:[-13, TC]=> Rf(x) = cosx-cos2x f(x) = - Sin x + 2cos (x) · Sin(x) 0 = (sin x)(-1+2cos(x)) 0 = Sinx f(-10)= cos(-10)-cos(-10) x = 0 $1 = 2\cos(x)$ $f(\overline{u}) = \cos(\overline{u}) - \cos^2(\overline{u})$ $\frac{1}{2} = \cos(x)$ x=+it f(3) = cos(3)-cos?(3) $f(-\frac{t\tau}{3}) = \cos(-\frac{t\tau}{3}) - \cos^2(-\frac{t\tau}{3})$ glob. min = -2 $f(t\tau)$ $f(0) = \cos(0) - \cos^{2}(0)$ glob $\max = \frac{1}{4} + (\frac{\pi}{3})f(-\frac{\pi}{3})$ $G(x) = R \quad f(x) = \frac{\ln x}{1 + \ln x}$ f(x) x.x-(ux.1)=0 = A(1-lnx)x-2=0 0=1-lnx x-2=04 Cax=1 f(e) = 1/2 X= e lim ln(t) = 0 Lim $(n(\hat{x}))$ the lim $\frac{1}{X} = \lim_{x \to \infty} \frac{1}{x} = 0$ glob max = $\frac{1}{x} + \frac{1}{x} + \frac{1}{x} = 0$ glob min ist aicht im weite berneich

	A23 a) If $(2\sin x)^h$ $f = \{0\}$ weum $(0, \frac{\pi}{6})$ $(\frac{\pi}{6})$ $($	
