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FACIT till DUGGA
ENVARIABELANALYS IP 1
BI och MI
2006-11-15

1. a) $\sin\left(\arcsin(-\frac{\sqrt{3}}{2})\right) = -\frac{\sqrt{3}}{2}$,

b) $\arcsin\left(\sin(\frac{3\pi}{2})\right) = -\frac{\pi}{2}$,

c) $\cos\left(\arccos(-\frac{1}{\sqrt{2}})\right) = -\frac{1}{\sqrt{2}}$,

d) $\arccos\left(\cos(-\frac{\pi}{6})\right) = \frac{\pi}{6}$,

e) $\arctan\left(\tan(\frac{2\pi}{3})\right) = -\frac{\pi}{3}$.

2. a) $\lim_{x\to\infty}(\sqrt{x^2-4x}-x) = -2$,

b) $\lim_{x\to 0}\frac{\tan(3x)}{x} = 3$,

c) $\lim_{x\to 0}\frac{\sin x - x}{e^x - 1} = 0$,

d) $\lim_{x\to 2}\frac{\sin \pi x}{x-2} = \pi$,

e) $\lim_{x\to-\infty}\left(1-\frac{2}{x}\right)^x = e^{-2}$.