Worksheet on Limits

#1 $\lim_{l \to 2} \dfrac{l-2}{l^2-6l+8}$

#2 $\lim_{H \to 0} \dfrac{5H^3+8H^2}{3H^4-16H^2}$

#3 $\lim_{t \to -4} (t+3)^{1976}$

#4 $\lim_{x \to m} \dfrac{x^3-m^3}{x^4-m^4}$

#5 $\lim_{\Delta x \to 0} \dfrac{2(x+\Delta x)-2x}{\Delta x}$

#6 $\lim_{\Delta x \to 0} \dfrac{(x+\Delta x)^2-2(x+\Delta x)+1-(x^2-2x+1)}{\Delta x}$

#7 $\lim_{\Delta x \to 0} \dfrac{(1+\Delta x)^3-1}{\Delta x}$

#8 $\lim_{\theta \to 0} \dfrac{(1-\cos\theta)^2}{\theta}$

#9 $\lim_{k \to 1} \dfrac{k+1}{k^2+k+1}$

#10 $\lim_{g \to 2} \dfrac{\sqrt{2g+3}-\sqrt{7}}{g-2}$

#11 $\lim_{r \to 0} \dfrac{\frac{1}{r+1}-1}{r}$

#12 $\lim_{z \to 3} \dfrac{\frac{z}{z+2}-\frac{3}{5}}{z-3}$

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Pg 86 Theorem 2.10 may be of some assistance.

#13 $\lim_{D \to -3} \dfrac{D^2 + 7D + 12}{D + 3}$

#14 $\lim_{\Theta \to 0} \dfrac{\cos \Theta \tan \Theta}{\Theta}$

#15 $\lim_{\phi \to \pi} \phi \sec \phi$

#16 $\lim_{x \to 0} \dfrac{\sec 2x \tan 2x}{x}$

#17 $\lim_{l \to 0} \dfrac{\cos 2l \tan 2l}{l}$

#18 $\lim_{\rho \to \pi/4} \dfrac{1 - \tan \rho}{\sin \rho - \cos \rho}$

#19 $\lim_{w \to 0} \dfrac{\sin 7w}{14w}$

#20 $\lim_{\Theta \to 0} \Theta^3 \cot \Theta \csc \Theta$

#21 $\lim_{x \to 0} \dfrac{\sec x - 1}{x \sec x}$

#22 $\lim_{v \to 0} \dfrac{\sin 4v}{5v}$