

WORKSHEET ON LIMITS

$$\#1 \quad \lim_{l \rightarrow 2} \frac{l-2}{l^2-6l+8}$$

$$\#2 \quad \lim_{H \rightarrow 0} \frac{5H^3 + 8H^2}{3H^4 - 16H^2}$$

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

$$\#4 \quad \lim_{x \rightarrow m} \frac{x^3 - m^3}{x^4 - m^4}$$

$$\#5 \quad \lim_{\Delta x \rightarrow 0} \frac{2(x + \Delta x) - 2x}{\Delta x}$$

$$\#6 \quad \lim_{\Delta x \rightarrow 0} \frac{(x + \Delta x)^2 - 2(x + \Delta x) + 1 - (x^2 - 2x + 1)}{\Delta x}$$

$$\#7 \quad \lim_{\Delta x \rightarrow 0} \frac{(1 + \Delta x)^3 - 1}{\Delta x}$$

$$\#8 \quad \lim_{\theta \rightarrow 0} \frac{(1 - \cos \theta)^2}{\theta}$$

$$\#9 \quad \lim_{k \rightarrow 1} \frac{k+1}{k^2 + k + 1}$$

$$\#10 \quad \lim_{g \rightarrow 2} \frac{\sqrt{2g+3} - \sqrt{7}}{g-2}$$

$$\#11 \quad \lim_{r \rightarrow 0} \frac{\frac{1}{r+1} - 1}{r}$$

$$\#12 \quad \lim_{z \rightarrow 3} \frac{\frac{z}{z+2} - \frac{3}{5}}{z-3}$$

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Pg 86 THEOREM 2.10
MAY BE OF SOME
ASSISTANCE.

$$\begin{array}{l} \#13 \quad \text{LIM} \\ D \rightarrow -3 \end{array} \quad \frac{D^2 + 7D + 12}{D + 3}$$

$$\begin{array}{l} \#14 \quad \text{LIM} \\ \theta \rightarrow 0 \end{array} \quad \frac{\cos \theta \tan \theta}{\theta}$$

$$\begin{array}{l} \#15 \quad \text{LIM} \\ \phi \rightarrow \pi \end{array} \quad \phi \sec \phi$$

$$\begin{array}{l} \#16 \quad \text{LIM} \\ x \rightarrow 0 \end{array} \quad \frac{\sec 2x \tan 2x}{x}$$

$$\begin{array}{l} \#17 \quad \text{LIM} \\ l \rightarrow 0 \end{array} \quad \frac{\cos 2l \tan 2l}{l}$$

$$\begin{array}{l} \#18 \quad \text{LIM} \\ \rho \rightarrow \pi/4 \end{array} \quad \frac{1 - \tan \rho}{\sin \rho - \cos \rho}$$

$$\begin{array}{l} \#19 \quad \text{LIM} \\ w \rightarrow 0 \end{array} \quad \frac{\sin 7w}{14w}$$

$$\begin{array}{l} \#20 \quad \text{LIM} \\ \theta \rightarrow 0 \end{array} \quad \theta^3 \cot \theta \csc \theta$$

$$\begin{array}{l} \#21 \quad \text{LIM} \\ x \rightarrow 0 \end{array} \quad \frac{\sec x - 1}{x \sec x}$$

$$\begin{array}{l} \#22 \quad \text{LIM} \\ v \rightarrow 0 \end{array} \quad \frac{\sin 4v}{5v}$$