

CALCULUS
Trigonometric limits
NEW

WARNING: In this homework, do NOT use
l'Hôpital's rule. It has not been covered yet.

0230-1. Compute

$$\lim_{\theta \rightarrow 0} \frac{[\theta^5][\cos^2 \theta]}{\sin^5 \theta}.$$

Do NOT use
l'Hôpital's rule.

0230-2. Compute

$$\lim_{h \rightarrow 0} \frac{1 - (\cos h) + (\sin h)}{\tan h}.$$

Do NOT use
l'Hôpital's rule.

0230-3. Compute

$$\lim_{x \rightarrow 0} \frac{\sin(8x)}{2x}.$$

Do NOT use
l'Hôpital's rule.

0230-4. Compute

$$\lim_{x \rightarrow 0} \frac{\sin^2(6x)}{\cos(2x)}.$$

0230-5. Compute

$$\lim_{\phi \rightarrow 0} \frac{\sin(3\phi)}{\tan(4\phi)}.$$

Do NOT use
l'Hôpital's rule.

0230-6. Compute

$$\lim_{\theta \rightarrow 0} \frac{\cos(\tan(-\theta))}{\sec^3(\theta)}.$$