

CALCULUS  
Trigonometric limits  
OLD

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

**0230-1. Compute**

OLD

$$\lim_{\theta \rightarrow 0} \frac{\sin^3 \theta}{[\theta^3][\cos(\theta^2)]}.$$

Do NOT use  
l'Hôpital's rule.

**0230-2. Compute**

OLD

$$\lim_{h \rightarrow 0} \frac{1 - \cos h}{\tan h}.$$

Do NOT use  
l'Hôpital's rule.

**0230-3. Compute**

OLD

$$\lim_{x \rightarrow 0} \frac{\sin(5x)}{x}.$$

Do NOT use  
l'Hôpital's rule.

**0230-4. Compute**

OLD

$$\lim_{x \rightarrow 0} \frac{\sin(5x)}{\cos(x)}.$$

**0230-5. Compute**

OLD

$$\lim_{\phi \rightarrow 0} \frac{\sin(5\phi)}{\tan(\phi)}.$$

Do NOT use  
l'Hôpital's rule.

**0230-6. Compute**

OLD

$$\lim_{\theta \rightarrow 0} \frac{\sin(\cos(2\theta))}{\sec^2(\theta)}.$$