$$\lim_{x\to 0} \frac{\sin x}{1 - \cos x}$$

In this problem attempt to evaluate:

$$\lim_{x\to 0} \frac{\sin x}{1 - \cos x}$$

using approximation.

a) Substitute linear approximations for $\sin x$ and $\cos x$ into this expression. Can you tell what happens in the limit?

b) Substitute quadratic approximations for $\sin x$ and $\cos x$ into this expression. Can you tell what happens in the limit?

18.01SC Single Variable Calculus
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