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Do the following:

1. $\lim_{x \rightarrow 0} \frac{\sin x}{3x}$

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

3. $\lim_{x \rightarrow 0} \frac{\sin(5x)}{2x}$

4. $\lim_{x \rightarrow 0} \frac{\tan(3x)}{x - x^3}$

5. $\lim_{x \rightarrow 0} \frac{\sin(2x)}{x + x^2}$

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

7. Use epsilons and deltas to prove

$$\lim_{t \rightarrow 1/4} \frac{2t + 1}{t} = 6.$$

Turn in 2,4,5,6