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Worksheet #41, MATH 10A

$$\textcircled{1} \lim_{x \rightarrow 0} \frac{\cos(x) - e^x}{\sin(x)}$$

$$\textcircled{2} \lim_{x \rightarrow +\infty} \frac{x^2}{2^x}$$

$$\textcircled{3} \lim_{x \rightarrow 0} \frac{x}{\ln(1/x^2)}$$

$$\textcircled{4} \lim_{x \rightarrow +\infty} \frac{x}{4^x}$$

$\textcircled{5}$ For $f(x) = x^2 - 3x + 1$ approximate a solution of $f(x) = 0$ by:

•) Bisection method (3 steps) on $[0, 1]$

•) Newton's method (2 steps) starting at $x_1 = 4$