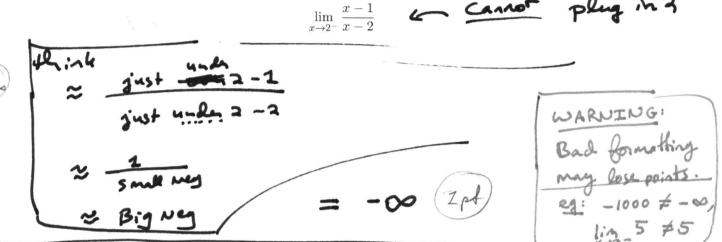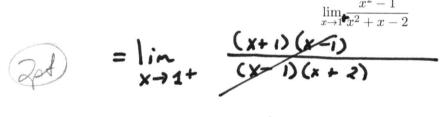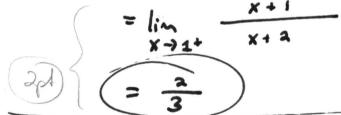9:37

Name: _____   Section: _____

You have **10** minutes to complete the quiz. Please **show all work**, and then **circle your answer**.

1. Evaluate the following limit **showing all work**

$$\lim_{x \to 2^-} \frac{x-1}{x-2}$$

← **cannot** plug in 2

think

(2pts)

$$\approx \frac{\text{just under } 2 - 1}{\text{just under } 2 - 2}$$

$$\approx \frac{1}{\text{small neg}}$$

$$\approx \text{Big Neg}$$

$$= -\infty \quad (2 \text{pt})$$

WARNING:
Bad formatting may lose points.
eg: $-1000 \neq -\infty$,
$\lim_{x \to 2^-} 5 \neq 5$

2. Evaluate the following limit **showing all work**

$$\lim_{x \to 1^+} \frac{x^2 - 1}{x^2 + x - 2}$$

← **cannot** plug in 1

(2pt)

$$= \lim_{x \to 1^+} \frac{(x+1)(x-1)}{(x-1)(x+2)}$$

$$= \lim_{x \to 1^+} \frac{x+1}{x+2}$$

(2pt)

$$\boxed{= \frac{2}{3}}$$

3. Evaluate the following limit **showing all work**

$$\lim_{x \to 0^+} e^{-1/x} \quad \neq e^x$$

think

(2pts)

$$\approx e^{\frac{-1}{\text{small pos}}}$$

$$\approx e^{-\text{BIGpos}}$$

$$\approx e^{\text{BIG neg}}$$

$$\approx \text{TINY}$$

$$= 0$$

(1pt)

1

9:40