Name_____ No Calculators. Present neatly. Score_____.
Evaluate the limit or explain why it does not exist.

1.

$$\lim_{t\to 0}\frac{\sqrt{1+t}-\sqrt{1-t}}{t}$$

2.

$$\lim_{x\to 16}\frac{4-\sqrt{x}}{16x-x^2}$$

3.

$$\lim_{t\to 0}\left(\frac{1}{t\sqrt{1+t}}-\frac{1}{t}\right)$$

4.

$$\lim_{h\to 0}\frac{(x+h)^3-x^3}{h}$$

5.

$$\lim_{x\to 0^-}\left(\frac{1}{x}-\frac{1}{|x|}\right)$$

Your work:

Name_____ No Calculators. Present neatly. Score_____.

Evaluate the limit or explain why it does not exist.

1.

$$\lim_{t\to 0}\left(\frac{1}{t}-\frac{1}{t^2+t}\right)$$

2.

$$\lim_{h\to 0}\frac{(3+h)^{-1}-3^{-1}}{h}$$

3.

$$\lim_{x\to -4}\frac{\sqrt{x^2+9}-5}{x+4}$$

4.

$$\lim_{h\to 0}\frac{\dfrac{1}{(x+h)^2}-\dfrac{1}{x^2}}{h}$$

5.

$$\lim_{x\to 0^+}\left(\frac{1}{x}-\frac{1}{|x|}\right)$$

Your work: