

Worksheet 6
10/10/2022

Find the following limits and justify each step by indicating the appropriate Limit Law(s).

1.

$$\lim_{\theta \rightarrow \pi/2} \theta \sin \theta$$

2.

$$\lim_{u \rightarrow 2} \frac{\sqrt{4u+1} - 3}{u-2}$$

3.

$$\lim_{t \rightarrow -3} \frac{t^2 - 9}{2t^2 + 7t + 3}$$

4.

$$\lim_{\theta \rightarrow 0} \frac{\sin(2\theta)}{\theta + \tan \theta}$$

5.

$$\lim_{x \rightarrow \pi} \sin(x) \sin\left(\frac{1}{x - \pi}\right)$$

6.

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