

Homework Set 11

Basic Limits

(sect 1.4, 1.6, 3.1 – 3.2)

Use an appropriate rule to compute the following limits.

1.

$$\lim_{x \rightarrow \infty} \frac{1}{x^{5/2}}$$

2.

$$\lim_{x \rightarrow \infty} \left(\frac{1}{3}\right)^x$$

3.

$$\lim_{x \rightarrow 0} \frac{x}{\sin x}$$

4.

$$\lim_{x \rightarrow -\infty} \arctan x$$

5.

$$\lim_{x \rightarrow \infty} \ln(x^3)$$

6.

$$\lim_{x \rightarrow \infty} e^{-2x}$$

7.

$$\lim_{x \rightarrow 7} 53$$

8.

$$\lim_{x \rightarrow 1} \ln x$$

9.

$$\lim_{x \rightarrow \infty} \left(\frac{9}{10}\right)^{-x}$$

10.

$$\lim_{x \rightarrow 0} \frac{\tan 2x}{3x}$$