

Math 150 Practice Test 1

1. For the function F graphed below, find:

a. $\lim_{x \rightarrow 3^-} F(x)$

b. $\lim_{x \rightarrow 3^+} F(x)$

c. $\lim_{x \rightarrow 3} F(x)$

d. $F(3)$

e. $\lim_{x \rightarrow \infty} F(x)$

f. $\lim_{x \rightarrow -\infty} F(x)$

2. Find the limits:

a. $\lim_{x \rightarrow -\infty} \frac{3x^3 - 4x}{2x^3 + 1}$

b. $\lim_{x \rightarrow -2} \frac{x^3 + 8}{x + 2}$

c. $\lim_{x \rightarrow 0^+} \pi$

d. $\lim_{y \rightarrow 4} \frac{4 - y}{2 - \sqrt{y}}$

e. $\lim_{x \rightarrow 3^-} \frac{2}{x - 3}$

3. Use the definition of the limit to prove that $\lim_{x \rightarrow 5} (2x - 7) = 3$.