L'HÔPITAL'S RULE QUIZ

BLAKE FARMAN

Lafayette College

Name: Solutions

1. Evaluate $\lim_{x\to 1} \dfrac{x^3-2x^2+1}{x^3-1}$

Since $\dfrac{1^3-2(1)^2+1}{1^3-1} = \dfrac{0}{0}$

$$\lim_{x\to 1} \frac{x^3-2x^2+1}{x^3-1} \overset{L'H}{=} \lim_{x\to 1} \frac{3x^2-4x}{3x^2}$$

$$= \frac{3-4}{3}$$

$$= \boxed{-\frac{1}{3}}$$