HOMEWORK 7

due date: December 6, 2018

1. Find the limit of the sequence.

$$\lim_{n \to \infty} \frac{2^n \sqrt[3]{n^3 + n^2} - n\sqrt[3]{8^n + 1}}{2^n}$$

2. Find the limit of the function.

$$\lim_{x \to 0} \frac{e^x - \cos x}{x}$$

3. Find the limit of the function.

$$\lim_{x \to 0} (2^{\cos x} - 1)^{\frac{1}{x^2}}$$

$(3 \times 1 \text{ points})$