

*This quiz is worth 10 points, and you have 10 minutes to complete it.*

**Calculators ARE allowed today, but you don't NEED them.**

**1.** (3 pts) Complete the following sentence so that it is a precise mathematical definition. A function  $f(x)$  is *increasing* on an interval  $I$  if:

**2.** (7 pts) Find the largest value of  $\delta$  such that if  $0 < |x - 2| < \delta$ , then  $|x^3 - 8| < 0.5$ .

**Very Important Note #1:** *Your work should include a darn good picture with horizontal and vertical "bars" in well-labeled places, so that it is extremely clear how you arrived at your answer. Don't make your graph too small!*

**Very Important Note #2:** *THIS IS NOT A DELTA-EPSILON PROOF!*