

## The Risks of Gastric-bypass Surgery at Iowa Methodist Medical Center, Des Moines

Name:

A couple of years ago gastric bypass surgery at Iowa Methodist Medical Center in Des Moines was under scrutiny. There were 6 deaths in 225 surgeries performed at the center in a year. We want to test Iowa Methodist's claim that their death rate is consistent with the national death rate, which is 1%. Assume that the national death rate is the true  $p$ , and that the outcomes at the Iowa Methodist Medical Center are a random sample from the outcomes at all centers across the USA.

1. What is the parameter of interest,  $p$ ? And what is its value?
2. Check the assumptions.
3.  $\hat{p} =$
4. Sketch the sampling distribution. Mark the observed  $\hat{p}$ .
5. Calculate the z-score corresponding to  $\hat{p}$ .
6. From the normal distribution tables, what proportion of possible  $\hat{p}$ 's are bigger than the observed value?