

**In-Video Quiz Questions for
Unit 3: Part 5 – (1) Decision Errors**

(02:05) – slide 2, after “But we need to consider all possibilities.”

1. A food safety inspector is called upon to investigate a restaurant with a few customer reports of poor sanitation practices. The food safety inspector uses a hypothesis testing framework to evaluate whether regulations are not being met. His hypotheses are:

H_0 : The restaurant meets food safety and sanitation regulations.

H_A : The restaurant does not meet food safety and sanitation regulations.

If he concludes that the restaurant meets food safety and sanitation regulations and the restaurant stays open when the restaurant is actually not safe, what type of error does he make?

(a) Type 1

(b) Type 2

(02:43) – slide 3, after “Declaring the defendant innocent when they are actually guilty.”

2. Which type of error is being committed when "Declaring the defendant innocent when they are actually guilty"?

(a) Type 1

(b) Type 2

(06:19) – slide 6, after “The goal in this case would be that we want to be cautious about failing to reject the null hypothesis when the null is actually

false.”

3. Consider to food safety inspector from earlier with the hypotheses:

H_0 : The restaurant meets food safety and sanitation regulations.

H_A : The restaurant does not meet food safety and sanitation regulations.

Which error is more problematic for the diners?

(a) Type 1

(b) Type 2

(08:29) – slide 8, after “An effect size is defined as the difference between the point estimate and the null value.”

4. Effect size is defined as the difference between point estimate and null value. Then, is the null hypothesis more likely to be rejected if the effect size is large or small?

(a) Small

(b) Large

Answers:

1. b
2. b
3. b

Explanation: Since the restaurant deemed safe by the inspector is actually not.

4. b