

Name: \_\_\_\_\_

1. Dunder Mifflin recently expanded its supply to include not just paper, but also copiers. David Wallace, the chief financial officer, claims that the expansion is a smashing success, with the copier production process producing defective parts only 0.7% of the time.

Michael Scott is not superstitious...but he is a little stitious. He believes that David Wallace's claim is incorrect. He randomly selects 750 copier parts and finds 12 that are defective. Do these data provide evidence at the 10% level that the proportion of defective copier parts is **not** 0.7%?

(a) Define the **parameter** of interest and state the **hypotheses**.

(b) Verify that the necessary **assumptions** hold.

(c) Calculate the appropriate **test** statistic. Show your work.

(d) Find the **rejection region**. Include a sketch showing where your test statistic falls relative to the RR.

(e) Use the results of the test to provide **support** for your decision about the null hypothesis.

(f) **Summarize** the results of your hypothesis test in context.

2. As regional co-manager of Dunder Mifflin, Jim suggests using the  $p$ -value approach to double check behind Michael. Find the appropriate  $p$ -value (use appropriate probability notation) and provide support for a decision about  $H_0$ . Does your conclusion change at all?