

(1 point) For each statement, express the null hypothesis  $H_0$  and alternative hypothesis  $H_1$  in symbolic form.

1. The mean salary of statistics professors is greater than 70,000 dollars.

- A.  $H_0 : \mu < 70,000, H_1 : \mu \geq 70,000$
- B.  $H_0 : \mu \leq 70,000, H_1 : \mu > 70,000$
- C.  $H_0 : \mu \geq 70,000, H_1 : \mu < 70,000$
- D.  $H_0 : \mu > 70,000, H_1 : \mu \leq 70,000$

2. At least one-half of all Internet users make on-line purchases.

- A.  $H_0 : \mu \geq 0.5, H_1 : \mu < 0.5$
- B.  $H_0 : p \geq 0.5, H_1 : p < 0.5$
- C.  $H_0 : p \leq 0.5, H_1 : p > 0.5$
- D.  $H_0 : \mu \leq 0.5, H_1 : \mu > 0.5$

3. IQ scores of statistics students have a standard deviation less than 15.

- A.  $H_0 : \sigma \geq 15, H_1 : \sigma < 15$
- B.  $H_0 : \mu \leq 15, H_1 : \mu > 15$
- C.  $H_0 : \mu < 15, H_1 : \mu \geq 15$
- D.  $H_0 : \sigma \leq 15, H_1 : \sigma > 15$