

In-Video Quiz Questions for  
Unit 1: Part 2 – (6) Exploring categorical variables

(04:30)

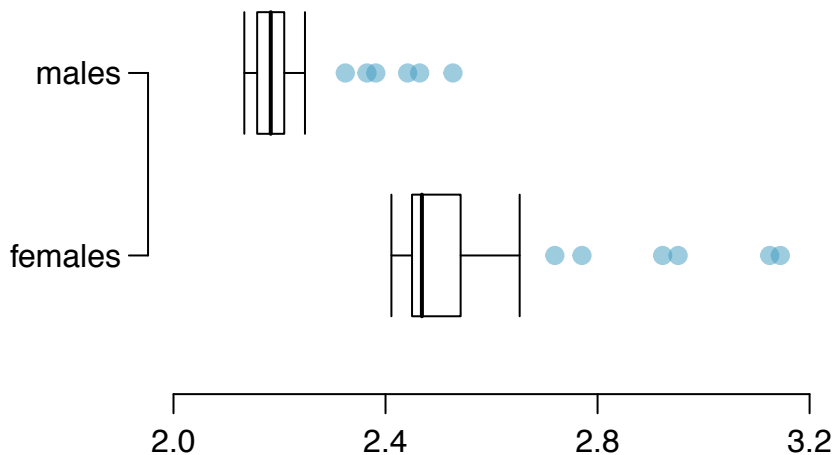
1. A 2012 survey asked 477 San Francisco residents if they you feel that the laws covering the sale of firearms should be made more strict, less strict, or kept as they are now. The survey also asked about respondents' party affiliation. The survey results are summarized in the contingency table below. Based on the survey results, which of the following is **false**?

	republican	democrat	independent	total
more strict	54	235	63	352
less strict	9	11	9	29
kept as they are	9	26	61	96
total	72	272	133	477

- (a) 75% of Republicans in this sample want stricter gun laws.
- (b) 86% of Democrats in this sample want stricter gun laws.
- (c) 18% of Independents in this sample want stricter gun laws.
- (d) 27% of those who think gun laws should be kept as they are Democrats.
- (e) Opinion on gun laws and party affiliation appear to be dependent.

(08:14)

2. The histogram and box plots below show the distribution of finishing times for male and female winners of the New York Marathon between 1980 and 1999. Which of the following is **false**?



- (a) On average females run faster than males as indicated by the higher median.
- (b) Female winning times are more variable than male finishing times.
- (c) Neither gender has runners that are unusually fast compared to the other winners.
- (d) Male distribution is more symmetric compared to the female distribution.
- (e) Gender and winning times appear to be dependent.

**Answers:**

1. c

*Explanation:*  $63/133 = 47\%$  of independents want stricter gun laws.

2. a

*Explanation:* Higher median means longer time, i.e. running slower.