Stats for Business   Practice Quiz 1

DO NOT TURN QUIZ OVER !!
(until asked to do so)

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For maximum benefit, observe exam conditions:

- Write answers yourself (No help from classmates)

- Calculators may not be shared.

- Use pencil/pen and calculator only. (No notes/cellphones)

- You have **8** minutes for quiz. **(We review afterward)**

Useful Information:

Six Steps of Inference:

Step 1 What is the *Question* of interest to the researcher?

Step 2 What *Population* is associated with the question?

Step 3 Take a *Sample* from the population.

Step 4 Measure one or more *Variables* on each unit in the sample.

Step 5 *Summarize* the sample measurements.

Step 6 Make an *Inference* about the population from the sample summary.

Stat 1030   Macbride Practice **Quiz 1**   Use <u>calculator</u> and <u>pen or pencil</u> only. (No cellphones.)

DIRECTIONS: **Turn** ⟨ face down ⟩ **when finished. You have** ⟨ 8 ⟩ **minutes to complete the quiz.**

News reports from January, 2020 indicated that the civil war in Syria (a country in the Middle East) continued unabated, posing huge policy problems for the U.S. and the international community.

Let the *Syria Approval Rating* for any particular group of people be defined as the percentage of people in that group who answer "Yes" to the question "Do you approve of U.S. government policy toward Syria?"

Suppose that the *Iowa City Press-Citizen* newspaper conducted a telephone survey on Feb. 1, 2020 in which this question was asked of 704 persons who live in either Iowa City or Coralville, as shown below:

Answer	UI students who live in Iowa City	UI students who live in Coralville	Residents of Iowa City and Coralville who are not UI students	Total
Yes	20	58	242	320
No	52	20	155	227
No Opinion	22	34	101	157
Total	94	112	498	704

1. Suppose ⟨ **Step 1** ⟩ of the **Six Steps of Inference** is:

    What's the <u>single</u> Syria Approval Rating for all UI students who live in either Iowa City or in Coralville on Feb. 1, 2020?

    (a) How many units are in the sample?   Answer _____

    (b) Provide a complete answer to ⟨ **Step 6** ⟩ in the space below. (Do <u>not</u> provide answers to Steps 2–5.)

2. Suppose ⟨ **Step 1** ⟩ of the **Six Steps of Inference** is:

    What's the <u>single</u> Syria Approval Rating for all residents of Iowa City and Coralville who are not UI students on Feb. 1, 2020?

    (a) How many units are in the sample?   Answer _____

    (b) Provide a complete answer to ⟨ **Step 6** ⟩ in the space below.

3. Within Iowa City and Coralville, do <u>UI students</u> or <u>non-UI students</u> appear to have a greater Syria Approval Rating on Feb. 1, 2020? (Choose one of these two groups as the answer.)

    Answer _____

Macbride Quiz Announcements - Prof. Whitten

- I post **Practice Quiz Solution** on the **Stats Website** after each quiz for easy review. (See Macbride Quiz page.)

- <u>Self-Grading!</u> Now compare <u>your</u> answers to the solution that I show!

- Spend the last few minutes of class <u>self-grading</u> and <u>comparing answers.</u> Speak with TAs!

DIRECTIONS: **Turn** ⬚ face down ⬚ when finished. You have ⬚ 8 ⬚ minutes to complete the quiz.

News reports from January, 2020 indicated that the civil war in Syria (a country in the Middle East) continued unabated, posing huge policy problems for the U.S. and the international community.

Let the *Syria Approval Rating* for any particular group of people be defined as the percentage of people in that group who answer "Yes" to the question "Do you approve of U.S. government policy toward Syria?"

Suppose that the *Iowa City Press-Citizen* newspaper conducted a telephone survey on Feb. 1, 2020 in which this question was asked of 704 persons who live in either Iowa City or Coralville, as shown below:

Sample for Pop 1
Sample for Pop 2
Population for Question 1

Answer	UI students who live in Iowa City	UI students who live in Coralville	Residents of Iowa City and Coralville who are not UI students	Total
Yes	20	58	242	320
No	52	20	155	227
No Opinion	22	34	101	157
Total	(94)	(112)	498	704

1. Suppose ⬚ **Step 1** ⬚ of the **Six Steps of Inference** is:

    What's the single Syria Approval Rating for all UI students who live in either Iowa City or in Coralville on Feb. 1, 2020?

    (a) How many units are in the sample? Answer **94 + 112 = 206**

    (b) Provide a complete answer to ⬚ **Step 6** ⬚ in the space below. (Do <u>not</u> provide answers to Steps 2–5.)

    The Syria Approval Rating for all UI students who live in Iowa City or Coralville is approximately 78/206 = 37.9% on Feb. 1, 2020.

2. Suppose ⬚ **Step 1** ⬚ of the **Six Steps of Inference** is:

    What's the <u>single</u> Syria Approval Rating for all residents of Iowa City and Coralville who are not UI students on Feb. 1, 2020?

    (a) How many units are in the sample? Answer **498**

    (b) Provide a complete answer to ⬚ **Step 6** ⬚ in the space below.

    The Syria Approval Rating for all residents of Iowa City and Coralville who are not UI students is approximately 242/498 = 48.6% on Feb. 1, 2020.

3. Within Iowa City and Coralville, do <u>UI students</u> or <u>non-UI students</u> appear to have a greater Syria Approval Rating on Feb. 1, 2020? (Choose one of these two groups as the answer.)

    Answer **non-UI students**