Data Analysis and Statistical Inference
Dr. Çetinkaya-Rundel
Duke University

In-Video Quiz Questions for Unit 4, Part 1: (3) Inference for comparing two independent means

(04:51)

1. What is the appropriate critical value?

biscuit intake	$\bar{x}$	s	n
solitaire	52.1 g	45.1 g	22
no distraction	27.1 g	26.4 g	22

(a) 1.72
(b) 1.96
(c) 2.07
(d) 2.08

(05:21)

2. Which of the following is the best interpretation for this interval?

We are 95% confident that…

(a) the difference between the average snack consumption of those who eat with and without distractions is between 1.83 g and 48.17 g.
(b) those who eat with distractions consume 1.83 g and 48.17 g more snacks than those who eat without distractions, on average.
(c) those who eat with distractions consume 1.83 g and 48.17 g less snacks than those who eat without distractions, on average.
(d) those who eat with distractions consume 1.83 g less to 48.17 g more snacks than those who eat without distractions, on average.
(e) those who eat with distractions consume 1.83 g more to 48.17 g less snacks than those who eat without distractions, on average.95% of distracted eaters consume between 32.1 g to 72.1 g of snacks after lunch.

(07:03)

3. What is the p-value?

    (a) between 0.005 and 0.01
    (b) between 0.01 and 0.02
    (c) between 0.025 and 0.05
    (d) between 0.05 and 0.10
    (e) between 0.10 and 0.20

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Answers:

1. d

Explanation: df = 21, two-tail area = 5%.

2. b

Explanation: The interpretation should indicate the direction of the relationship (i.e. which group is higher) and the difference between with and without distractions is positive.

3. c

Explanation: df = 21, T = 2.24, and we're looking for a two-tailed p-value.