Lesson 3 Quiz

TOTAL POINTS 5

1. Suppose we are interested in analyzing the purchase of comics (CM) and fiction (FC) in the transaction history of a bookstore. We have the following 2 × 2 contingency table summarizing the transactions. If lift is used to measure the correlation between CM and FC, what is the value for lift(CM, FC)? 1 point

	CM	¬CM	Σrow
FC	300	700	1000
¬FC	1200	800	2000
Σcol	1500	1500	3000

- (●) 0.6
- ( ) -2e-4
- ( ) -0.6
- ( ) 2e-4

2. Suppose a school collected some data on students' preference for hot dogs (HD) vs. hamburgers (HM). We have the following 2×2 contingency table summarizing the statistics. If χ^2 is used to measure the correlation between HD and HM, what is the χ^2score? 1 point

	HD	¬HD	Σrow
HM	40	24	64
¬HM	210	126	336
Σcol	250	150	400

- (●) 0
- ( ) 1
- ( ) -1
- ( ) -∞

3. What is the value range of the lift measure? 1 point

- (-∞, +∞)
- [-1, 1]
- [0, +∞)
- [0, 1]

4. Which of the following measures is NOT null invariant? " 1 point

- All confidence
- Cosine
- χ^2
- Kulcyzynski

5. Suppose we are interested in analyzing the transaction history of several supermarkets with respect to purchase of apples (A) and bananas (B). We have the following table summarizing the transactions. 1 point

Supermarket	AB	¬AB	A ¬B	¬A ¬B
S1	100,000	1,000	1,000	100
S2	50,000	7,000	3,000	600,000
S3	700,000	10,000	400,000	100,000

Which of the following measures would you use to determine the correlation of purchases between apples and bananas across all these supermarkets?

- [ ] Lift
- [ ] χ^2
- [x] Cosine
- [x] Kulcyzynski

I, **BAL KRISHNA NYAUPANE**, understand that submitting work that isn't my own may result in permanent failure of this course or deactivation of my Coursera account.

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