

20S-MATH61-2 Quiz 1

CHARLES ZHANG

TOTAL POINTS

10 / 10

QUESTION 1

1 Question 1 10 / 10

- **0 pts** Correct

- **0 pts** Next time, prove your claim: "there is no combination/values ..."

- **0 pts** Be a bit more explicit. E.g.: inductive step, base step, etc.

- **2 pts** Incorrect/incomplete part (see note in image).

- **4 pts** Incorrect. Partial credit awarded (see notes in picture)

- **1 pts** Almost got it (see note).

✓ - **0 pts** Correct, but see note.

- **0 pts** Please improve quality of submission.

- **6 pts** Baseless claims and/or answer that makes no sense (see note).

1 Since inclusion-exclusion had not been discussed prior to you taking the quiz, it was expected for you to solve the problem using other set tools.

80 students

3 in Psych, CS, Calc

15 in Calc and CS

8 in Calc and Psych

24 in Psych and CS

42 in Calc

36 in Psych

40 in CS

40 not in CS

44 not in Psych

38 not in Calc

→

$$|X \cup Y \cup Z| = |X| + |Y| + |Z| - |X \cap Y| - |X \cap Z| - |Y \cap Z| + |X \cap Y \cap Z| \rightarrow \text{Inclusion/Exclusion}$$

$$|X \cup Y \cup Z| = 42 + 36 + 40 - 15 - 8 - 24 + 3$$

$$|X \cup Y \cup Z| = 74$$

74 people took at least 1 of CS, Psych, or Calc

$$80 - 74 = 6$$

∴ 6 people didn't take any of the 3 subjects

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