

Functions & Trig.
Misc Probability HW

Name _____

1.) A school district has a student population in which 30% take Honors mathematics course. The same school district has a student population in which 25% enjoy watching basketball. If taking an Honors mathematics course and enjoy watching basketball are considered **independent**, what the probability that a student at this school district takes Honors mathematics and enjoys watching basketball?

2.) There are 35 students in the Honor Society. The number of students that take Spanish is 21. The number of students that take French is 16. The number of students that take Spanish and French is 7.

Is taking French independent of taking Spanish? **Show appropriate work.**

- 3.) The SC Electric Company has bid on two electrical wiring jobs. The owner of the company believes that
- The probability of being awarded the first job (event A) is 0.75
 - The probability of being awarded the second job (event B) is 0.5
 - The probability of being awarded both jobs (event A and event B) is 0.375

If the owner's beliefs are correct, can you consider event A is independent to event B? **Show work.**

4.) Events D and E are **independent**, with $P(D)=0.6$ and $P(D \text{ and } E)=0.18$. Which of the following is true?

(1) $P(E)=0.12$

(2) $P(E)=0.4$

(3) $P(D \text{ or } E)=0.28$

(4) $P(D \text{ or } E)=0.72$