

Conditional Probability - Venn diagrams

Name :

Class :

Date :

Mark :

/4

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1) Given that J and G are two events and $P(J) = 0.42$, $P(G) = 0.38$ and $P(J \cap G) = 0.1$, find: [1]

a) $P(J \cup G)$

b) $P(J|G)$

c) $P(G|J)$

d) $P(J|G')$

2) Given that G and L are two events and $P(G) = 0.33$, $P(L) = 0.35$ and $P(G \cup L) = 0.47$, [1]
find:

a) $P(G \cap L)$

b) $P(G|L)$

c) $P(L|G)$

d) $P(G|L')$

3) Given that H and S are two events and $P(H) = \frac{39}{100}$, $P(S) = \frac{29}{100}$ and $P(S|H) = \frac{11}{39}$, find: [1]

a) $P(H \cap S)$

b) $P(H|S)$

c) $P(H|S')$

4) 49 boys were asked which food they like: curry (C), pizza (P) or spaghetti (S).

[1]

22 like curry

26 like pizza

25 like spaghetti

14 like both curry and pizza

8 like both curry and spaghetti

13 like both pizza and spaghetti

5 like all three of them

6 like none of them

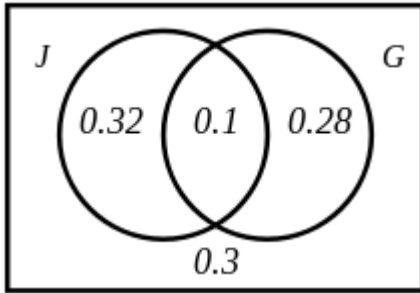
a) By drawing a Venn Diagram, find $n((C \cap P) \cup S)$.

b) Find the probability that a boy selected at random likes only curry.

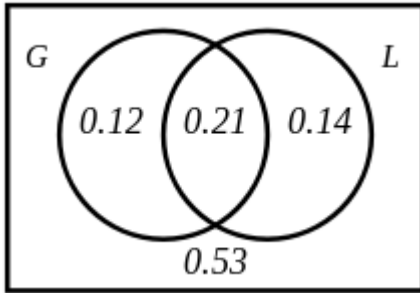
c) Find the probability that a boy selected at random likes curry, given that he likes pizza.

Solutions for the assessment Conditional Probability - Venn diagrams

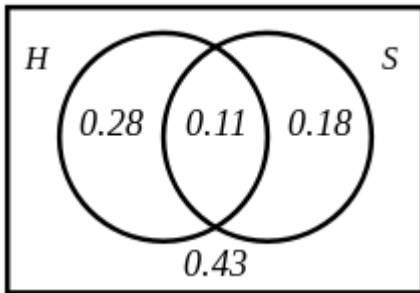
- 1) a) $P(J \cup G) = 7/10$ b) $P(J|G) = 5/19$ c) $P(G|J) = 5/21$ d) $P(J|G') = 16/31$



- 2) a) $P(G \cap L) = 21/100$ b) $P(G|L) = 3/5$ c) $P(L|G) = 7/11$ d) $P(G|L') = 12/65$

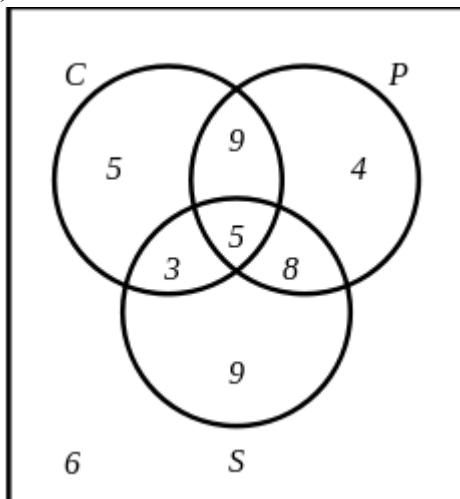


- 3) a) $P(H \cap S) = 11/100$ b) $P(H|S) = 11/29$ c) $P(H|S') = 28/71$



4)

- a) 34



- b) $\frac{5}{49}$
c) $\frac{7}{13}$