

**Quality of H.S.**

Score	P	A	S	Total
<b>L</b>	105	60	55	220
<b>M</b>	70	175	145	390
<b>H</b>	25	65	300	390
<b>Total</b>	200	300	500	1000

Alternatively, a definition of conditional probability is

$$P(A|B) = \frac{P(A \cap B)}{P(B)}.$$

In our example,

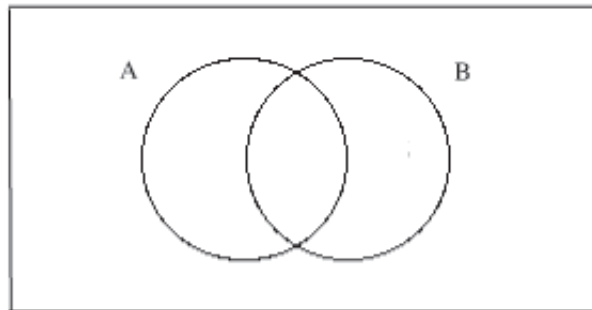
$$P(P|H) = \frac{P(P \cap H)}{P(H)} = \frac{.025}{.39} = .0641.$$

DEFINITION. Events  $A$  and  $B$  are mutually exclusive if

$$P(A \cap B) = 0.$$

Addition Rule.

$$P(A \cup B) = ?.$$



$$P(A \cup B) = P(A) + P(B) - P(A \cap B).$$