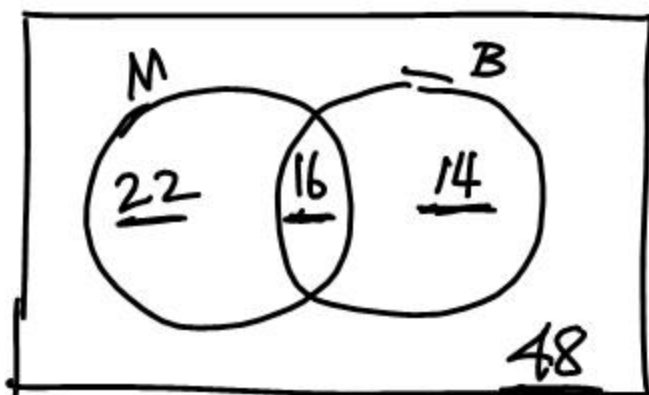




# Venn Diagrams

Ex. An IB class has 100 students. 38 of them take HL Math. 30 of them take HL Bio. 48 of them neither of these. How many students take both classes? 16

Solution:



$$\begin{array}{r} 48 \\ + 38 \\ \hline 86 \\ + 30 \\ \hline 116 \end{array}$$

$$\begin{array}{r} 38 \\ - 16 \\ \hline 22 \\ 30 \\ - 16 \\ \hline 14 \end{array}$$

$$P(M \cup B) = \frac{52}{100}$$

↑  
union (or)

$$P(M \cap B) = \frac{16}{100}$$

↑  
intersection (and)

$$P(B') = \frac{70}{100}$$

↑  
complement of B  
(not B)

3A #1, 4, 5

3B #1-3