PROBABILITY

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16.3.18 [1] In class XI of a school 40% of the students study Mathematics and 30% study Biology. 10% of the class study both Mathematics and Biology. If a student is selected at random from the class,find the probability that he will be studying Mathematics or Biology

Solution:

Random Variable	Subject	Probability
M	Mathematics	$\Pr(M)$=0.4
B	Biology	$\Pr(B)$=0.3
M, B	Both	$\Pr(MB)$=0.10

Table 2: Random Variables M, B and M, B

$$\implies \Pr(M + B) = \Pr(M) + \Pr(B) - \Pr(M, B) \tag{16.3.18.1}$$
$$= 0.4 + 0.3 - 0.10 \tag{16.3.18.2}$$
$$= 0.6 \tag{16.3.18.3}$$

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[1]Read question numbers as (CHAPTER NUMBER).(EXERCISE NUMBER).(QUESTION NUMBER)