Question:The probability that at least one of the events A and B occurs is 0.6. If A and B occur simultaneously with probability 0.2, then $P(\overline{A}) + P(\overline{B})$ is
(A) 0.4
(B) 0.8
(C) 1.2
(D) 1.6
Solution: : Given,

TABLE 0
TABLE-1

Parameters	values	Description
X_i	0	Probability of A
	1	Probability of B
$p(0+1)$	0.6	Probability that atleast one of the events occur
$p(0-1)$	0.2	Probability that A and B occur simultaneously

$$\therefore P(0+1) = P(0) + P(1) - p(0-1) \tag{1}$$
$$P(0) + P(1) = 0.8 \tag{2}$$
$$1 - P(\overline{0}) + 1 - P(\overline{1}) = 0.8 \tag{3}$$
$$\therefore P(\overline{0}) + P(\overline{1}) = 1.2 \tag{4}$$