Let $S = \{a, b, c, d, e, f\}$ be a sample space for an experiment and let $E = \{a, b, c\}$, $F = \{c, d, e\}$, and $G = \{a, b, f\}$. If the probability of G is 0.62 and the probability of $E \cup F$ is 0.78, then what is the probability of GE^c ?

(a) 0.22

(b) 0.78

(c) 0.43

(d) 0.57

(e) 0.4

(f) 0.6

(g) 0.97

(h) 0.5

(i) 1

(j) 0

(k) None of these

Let $S = \{a, b, c, d, e, f\}$ be a sample space for an experiment and let $E = \{a, b, c\}$, $F = \{c, d, e\}$, and $G = \{a, b, f\}$. If the probability of G is 0.63 and the probability of $E \cup F$ is 0.77, then what is the probability of GE^c ?

(a) 0.23

(b) 0.77

(c) 0.44

(d) 0.56

(e) 0.4

(f) 0.6

(g) 0.96

(h) 0.5

(i) 1

(j) 0

(k) None of these

Let $S = \{a, b, c, d, e, f\}$ be a sample space for an experiment and let $E = \{a, b, c\}$, $F = \{c, d, e\}$, and $G = \{a, b, f\}$. If the probability of G is 0.6 and the probability of $E \cup F$ is 0.82, then what is the probability of GE^c ?

(a) 0.18

(b) 0.82

(c) 0.45

(d) 0.55

(e) 0.42

(f) 0.58

(g) 0.97

(h) 0.5

(i) 1

(j) 0

(k) None of these

Let $S = \{a, b, c, d, e, f\}$ be a sample space for an experiment and let $E = \{a, b, c\}$, $F = \{c, d, e\}$, and $G = \{a, b, f\}$. If the probability of G is 0.61 and the probability of $E \cup F$ is 0.81, then what is the probability of GE^c ?

(a) 0.19

(b) 0.81

(c) 0.49

(d) 0.51

(e) 0.42

(f) 0.58

(g) 0.93

(h) 0.5

(i) 1

(j) 0

(k) None of these

Solution: $P(GE^c) = P(\{f\}) = P((E \cup F)^c) = 1 - P(E \cup F)$.