

H. W. [1]

Answer the Following Questions:

→ If the probability that it will rain tomorrow is 0.23, then:

(1) the probability that it will not rain tomorrow is:

(A) -0.23	(B) 0.77	(C) -0.77	(D) 0.23
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→ The probability that a factory will open a branch in Riyadh is 0.7, probability that it will open a branch in Jeddah is 0.4, and the probability that it will open a branch in either Riyadh or Jeddah or both is 0.8, then the probability that it will open a branch:

(2) In both cities is:

(A) 1.1	(B) 1.9	(C) 0.3	(D) 0.8
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(3) In neither cities is:

(A) 0.4	(B) 0.7	(C) 0.3	(D) 0.2
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→ A random sample of 200 adults are classified according to sex and their level of education in the following table:

Education	Male	Female
Elementary	28	50
Secondary	38	45
College	22	17

If a person is selected at random from this group, then:

(4) the probability that he is a male is:

(A) 0.3182	(B) 0.44	(C) 28	(D) 78
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(5) The probability that the person is male given that the person has a secondary education is:

(A) 0.4318	(B) 0.4578	(C) 0.19	(D) 0.44
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(6) The probability that the person does not have a college degree given that the person is a female is:

(A) 0.8482	(B) 0.1518	(C) 0.475	(D) 0.085
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➔ If in a class of 324-Stat. of 80 students , 60 are from engineering college and the rest are from computer science college, 10% of the engineering college students have taken this course before, and 5% of computer science college students have taken this course before. If one student from this class is randomly selected, then:

(7) the probability that he has taken this course before is:

(A) 0.25	(B) 0.20	(C) 0.80	(D) 0.75
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(8) If the selected student has taken this course before then the probability that he is from the computer science college is:

(A) 0.625	(B) 0.375	(C) 0.80	(D) 0.20
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(9) Two engines operate independently, if the probability that an engine will start is 0.3, and the probability that other engine will start is 0.5, then the probability that both will start is:

(A) 1	(B) 0.15	(C) 0.24	(D) 0.5
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(10) Assume that $P(A) = 0.2$, $P(B) = 0.4$, $P(A \cap B \cap C) = 0.05$, and $P(A \cap B) = 0.92$, then the event A and B are,

(A) Independent	(B) Dependent	(C) Disjoint	(D) None of these.
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(11) Using question (2), $P(C|A \cap B)$ is equal to,

(A) 0.604	(B) 0.625	(C) 0.054	(D) -0.925
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(12) A company in Riyadh has 100 cars, 0.46 are white. Of the cars that aren't white, 0.40 are green. How many company cars are neither white nor green (not white or not green)?

(A) 67	(B) 54	(C) 14	(D) 20
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Suppose there is a factory with three assembly lines (A, B, and C) that each makes the same part. 50% of parts produced by the factory come off of assembly line A, 30% come off of assembly line B, and 20% come off of assembly line C. Finished parts can be categorized as either defective or not. It is known that 0.4% of the parts from line A are defective, 0.6% of the parts from line B are defective, and 1.2% of the parts from line C are defective.

(13) The probability of selecting a defective part is equal to:

(A) 0.323	(B) 0.290	(C) 0.387	(D) 0.006
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(14) Suppose that we are holding a defective part in our hand, the probability that it came from assembly line A?

(A) 0.323	(B) 0.290	(C) 0.387	(D) 0.006
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