

No.

Chapter 5 A

1 You are selecting 1 supervisor from 5 employees at random by giving each a number, x , from 1 to 5.

a) What is the probability distribution of X (i.e., $f(x)$)?

b) Find $p(X \leq 3) =$

c) Find the mean and variance:

3 If it is true that $P(\text{smoker}|\text{lung cancer victim}) = 80\%$, then for groups of lung cancer victims:

a) Find the probability fewer than 11 of 15 will be smokers.

b) Probability that less than half of 12 are chain smokers:

4 Of tires tested, 10% blow out on the track. For the next 16 to be tested, find the probability:

a) $P(2 \leq X \leq 5) =$

b) Fewer than 4 have blowouts.

c) At least 4 have blowouts.

5 The probability of survival is 85%. What is the probability that 5 of 8 survive?

6 When polled, 60% believe anti-depressants cover up problems. What is the probability that at least 5 of 10 will agree ?

7 If 40% of mice are protected from disease, then find:

a) $P(\text{none contract the disease})$ if 6 mice are exposed?

b) $P(\text{fewer than 3 of 6 will contract the disease}) =$

c) Probability that more than 3 of 5 will contract the disease?

8 Find the mean and variance if: $n = 12$ $p = 80\%$

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1 a)

1 b) 60%

1 c)

2 a) 21%

2 b) 38%

2 c)

3 a)

3 b) 0.4%

4 a) 48%

4 b)

4 c) 1.7%

5 8%

6 83.4%

7 a) 5%

7 b) 54.4%

7 c) 8.7%

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