Question 2

The National association of college and university business officers researched the change in university and college endowments from 2007 to 2008.The table below shows the findings of 203 colleges and universities with 2008 endowment levels above 300 million dollar . It indicates how many schools with an endowment level had their endowment increase in value. How many had their endowment decrease by between 0 and 5% and how many had their endowment decrease by more than 5%. Among these 203 colleges and universities, find the probabilities of the events below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Change in Value | | |  |
| Endowment Value in dollars | Positive increase | Between 0 and 5% decrease | More than 5% Decrease | Total |
| 300-499 Mil | 19 | 27 | 16 | 62 |
| 500-999 Mil | 24 | 26 | 14 | 64 |
| 1-1,999 | 22 | 17 | 6 | 45 |
| 2 Bill or more | 20 | 8 | 4 | 32 |
| Total | 85 | 78 | 40 | 203 |

A The endowment had a positive increase in value

B The endowment was valued at$2 billion or more and lost more than 5%

C The endowment did not decrease by 5% or more

D The endowment had between a 0 and 5% reduction or had a value of $300-499 mil

E The endowment was less than 2 billion and had a positive increase.

Question3

The table below shows the results from a subset of the 2007 American Community Survey. Find the probability of the given event

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | House hold Income | | | |  |  |
| Number of Vehicles | $0- 49,999 | 50,000- 99,999 | 100,000- 149,999 | 150,000 or more | Total |  |
| 0-2  3 or more | 504  36 | 199  80 | 64  36 | 46  35 | 813  187 |  |
| Total | 540 | 279 | 100 | 81 | 1000 |  |

a) Earning 150,000 or more ,given that a household has 3 or more cars

b) Having 0-2 cars ,given that a household earns $0-49,999

c) Having 3 or more cars ,given that a household earns between $100,000-149,999

d) Earning $50,000 – 99,999, given that the household has 0-2 cars

Question3

A car dealership has 8 red ,9 silver and 5 black cars on the lot . Ten cars are randomly chosen to be displayed in front of the dealership. Find the probability that

1. 4 red and the rest are silver
2. 5 are red and 5 are black
3. 8 are red