## Conditions

TubeView, a digital television distribution company based in Gatineau (QC), hires a marketing firm to gauge the satisfaction levels of their customers. The CEO of TubeView has claimed that past polls have suggested that the customer satisfaction level is at 90%.

If this claim was true, what is the probability that in a random sample of 12 customers:

a) Exactly 8 customers are satisfied with TubeView's service?

b) At least 10 customers are satisfied with TubeView's service?

c) All of the customers they contact are satisfied with TubeView's service?

d) At most 2 customers are not satisfied with TubeView's service?

e) P(5 less than or equal to X < 8) where X = satisfied customer?

## Solution

a) $\frac{1}{12} \cdot 0.9 = 0.075$

b) $\frac{3}{12} \cdot 0.9 = 0.225$

c) $\frac{1}{12} \cdot 0.9 = 0.075$

d) $\frac{2}{12} \cdot 0.9 = 0.15$

e) $\frac{4}{12} \cdot 0.9 = 0.3$

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