21) Question: The state university conducted a research on correlation between memory loss and sleep inducing medicine. If a random selection is made from among all the people who were interviewed for this research, what is the probability that the person remembered between 6 to 10 jokes? Group "A" represented people who had not taken any sleep inducing medicine. Group "B" represented people who had taken a dose of sleep inducing medicine within one hour of the start of the interview. Please see the table below for details.

Research on correlation between "memory loss" and "a dose of sleep inducing medicine"					
	Total # of people in each category	Jokes remembered during interview with a researcher			
		zero	1 to 5 jokes	6 to 10 jokes	11 or more jokes
Group "A". (no medicine)	39	10	15	9	5
Group "B". (a dose of sleep inducing medicine within one hour of the start of interview)	39	19	12	6	2
Total	78	29	27	15	7

A) $\frac{9}{15}$

B) $\frac{78}{15}$

C) $\frac{15}{78}$

D) $\frac{6}{15}$

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For speed, while solving something similar, only THINK the words in blue; WRITE only the words in other COLORS.

Given: 1)   The state university conducted a research on correlation between memory loss and a dose of sleep
             inducing medicine.
         2)   Group "A" represented people who had not taken any sleep inducing medicine.
         3)   Group "B" represented people who had taken a sleep inducing medicine within one hour of the start of the
             interview.
         4)   A random selection is made from among all the people who were interviewed for this research.
Solve: What is the probability that the person remembered between 6 to 10 jokes?

Road Map of Solution:
First   Step: Number of possible selections satisfying the scenario in question.
                 i.e. the person remembered between 6 & 10 jokes.
                 i.e. What is the number of possible selections that remembered between 6 & 10 jokes.
Second Step: Number of possible selections satisfying Given Fourth Statement.
                 i.e. A random selection is made from among all the people who were interviewed for this research.

Solution
First   Step: What is the number of possible selections that remembered between 6 & 10 jokes.
                 =   6 + 9
                 = 15

Second Step: What is the Total number of possible selections if
                 a random selection is made from among all the people (Total Number) who were interviewed for this
                 research.
                 =   78

If a random selection is made, the probability that the person remembered between 6 to 10 jokes,

             = $\frac{\text{number of possible selections that remembered between 6 \& 10 jokes}}{\text{Total number of possible selections}}$

             = $\frac{15}{78}$ . . . .   *Answer(C)*