

x	f	$f \times x$
0	28	0
1	62	62
3	10	30
4	4	16
	<u>104</u>	<u>108</u>

$$\text{mean of freq. dist} = \frac{108}{104} = 1.03$$

$$\text{mean of binomial dist} = np = 1.02$$

$$P = \frac{1.03}{n=4} = 0.25$$

$$q = 1 - 0.25 = 0.75$$

$$x = 0, 1, 3, 4$$

$$P(x=0) = {}^4C_0 (0.25)^0 (0.75)^4 = 0.316$$

$$P(x=1) = {}^4C_1 (0.25)^1 (0.75)^3 = 0.421$$

$$P(x=3) = {}^4C_3 (0.25)^3 (0.75)^1 = 0.468$$

$$P(x=4) = {}^4C_4 (0.25)^4 (0.75)^0 = 0.0039$$

so,

x	$P(x)$	Expected Frequency ($\frac{N}{104} \times P(x)$)
0	0.316	$32.86 \sim 33$
1	0.421	$43.78 \sim 44$
3	0.468	$48.67 \sim 49$
4	0.0039	$0.4056 \sim 0$

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Ans