Question 15

Question 14, continued. For a two-sided fixed-level test at significance level 0.01, find the rejection region.

Options

A $\lvert t\rvert < 2.583$	**B** $\lvert t\rvert > 2.898$	**C** $\lvert t\rvert < 2.898$	**D** $\lvert t\rvert > 2.567$
E $\lvert t\rvert > 2.583$	**F** $\lvert t\rvert < 2.921$	**G** $\lvert t\rvert > 2.921$	**H** $\lvert t\rvert < 2.567$

Question 16

In accident survey data, twelve monthly counts were 5, 4, 4, 2, 1, 2, 1, 3, 0, 2, 1, 4. Calculate the obtained SP in a test that the underlying mean monthly accident rate is less than 3, assuming a Poisson model for the variation in the monthly count.

$H_0: \mu = 3$
$H_1: \mu < 3$
$P(29)$

Options

A 0.2779	**B** 0.1159	**C** 0.5768	**D** 0.1379
E 0.4346	**F** 0.1926	**G** 1	**H** 0.1

Question 17

Observations were collected on a measured attribute in independent samples from two populations, A and B. The observed data were (sample A) 404, 223, 301, 273, 330, 332, 330, 304, 270, 230, 286, 230 and (sample B) 261, 284, 289, 245, 286, 335, 215, 286, 296, 254. Assuming a normal model for the variation in this measurement in both populations, and assuming the underlying variance to be the same in both cases, find the value of the pooled estimator for the common variance.

$S_1^2 = 2780$
$S_p = 297.75$
$\bar{x} = 275.1$
$S_2^2 = 1077$

Options

A 2014	**B** 1831	**C** 2006	**D** 1759
E 1929	**F** 1838	**G** 2780	**H** 1077

Question 18

Question 17, continued. Find the obtained SP for a two-sample t-test using the data of Question 17.

(SP) obtain obtained direction

Options

A 0.1	**B** 0.1846	**C** 0.9186	**D** −0.9186
E 0.0923	**F** 0.2553	**G** 0.3693	**H** 0.1841