**Answer on Question #39546, Math, Other**

Let $n_1 = n_2 = 400$ be the number of students in each group, $x_1 = 290$ and $x_2 = 310$ – the number of students that favoured the autonomous status. We will use proportion z test to find out whether the opinion is independent of the level of classes of students.

$H_0: p_1 = p_2$

$H_1: p_1 \neq p_2$

where $p_1 = \frac{x_1}{n_1} = 0.725$ and $p_2 = \frac{x_2}{n_2} = 0.775$.

Pooled proportion:

$$p = \frac{x_1 + x_2}{n_1 + n_2} = 0.75$$

Test statistic:

$$z = \frac{p_1 - p_2}{\sqrt{p(1-p)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} = -1.633$$

Critical values:

$$z_{1,2} = \pm 1.96$$

Since z is not in the rejection region, we don't reject null hypothesis.

ANSWER: There is not enough evidence to conclude that the opinion regarding autonomous status of colleges are dependent of the level of classes of students.