**Hypothesis tests for the correlation coefficient and the slope of the least-squares regression line**

The Cadet is a popular model of sport utility vehicle, known for its relatively high resale value. For a random sample of Cadets, each bought "new" two years ago and each sold "used" within the past month, the [sample correlation coefficient](http://www.phoenix.aleks.com/alekscgi/x/Isl.exe/1xPugJ2N2Jda2fH88q19f7TfsvYFXb3nqrzRVQEFrlqMe3IujoOYjQitexSr_eUle7Hy64eytsAY0oxvhWJKQpvGLSPGp9GURW4X-Kox6VAgRIf4ngHy?1bZp7yPObId-CNCP8BOOFk6WnipiksFDd2ozzy_ujuXPAEA-WTey_VnjhwvCaHOBSJ2r3GDqJTn4D3rLOHPAdhG-0EAYYjUNHNguSp5zrMy7HFRRcttejXIIpwylj) relating mileage on the odometer and used selling price was . Based on this information, test for a significant [linear relationship](http://www.phoenix.aleks.com/alekscgi/x/Isl.exe/1VANHTn89TzD92ynySoegKtqFXRzWdluchK4ngozdpMk4xiN2GY22gDF4VWyOb3S4K5_ikPI6nm28GArDNEPXmOXK10gevTHlNXdwiJOiZmclOs6I95o?1XN5w6lmyJsNdfAHUAdmWWG6JDU0m8H92M3n86b_JHJHPeUlQqL9GLL4Ey_kQoif01VF_VzFstLntcjUCacO1zBrYNWgZVYsmjVE0urAkU4Um5I7iloVgUKmDy45_U5MzhMU-ok6TNWoQt37Aw4CHHSQhco#linearlyRelated) between the two variables *mileage* and *used selling price* by doing a hypothesis test regarding the population correlation coefficient . (Assume that the two variables have a [bivariate normal distribution](http://www.phoenix.aleks.com/alekscgi/x/Isl.exe/13ZSG5PBO5QkOaO-1EMdI0S1B9kgjm1lmNsEizXgvREtHTFS_w5Q_zbGHyRVypJLHAOw4D2wePlvkw30XMqCol9DDqZDggyquXD7J7Ua4xl7uFusYfO2?1zMwAE1xm8uJGU35047xsvWlQbmMY5_OValKHEVwHVhd5sDDhCRChHx_4xdwtjpPSsz7AybJd3RAFhJmd0OY7E2YA_lIKUZhblqs9rH90tn9rXyRWMNs).) Use the [level of significance](http://www.phoenix.aleks.com/alekscgi/x/Isl.exe/19IuizXN0zSa0Ept9s0a6GsQhAVFBTnnoYHfp1AFP8ZlngNzchjTc1JLn96bbJ2gnGpyfVE6aRiT2h_vsKP5K5tjunIGVcfCyK3MdUmxfviXypv4etpy?102YSODcWgykISb4cFtSx8uVNnbQe9SKa00H5GU0itLAm7e4iU4uD9GafAhrWs8sW7z513r_C_JWlWGNimCh0f8RGYYP5ASXvSRMpHQekCZzM5qU_WKJHWq), and perform a [two-tailed test](http://www.phoenix.aleks.com/alekscgi/x/Isl.exe/1_fbqPd64xir4QEoGLTqDYCdvNwRtqavVbDcQRYR8byABnvbeuMaeR-PBPJBHEW0B8EjFt7jsOsaIufS5hGOEdqp-6QpKWMmAh51Ryt2F-VEAarJXXEj?1uMHeD1jQ7uGVwqIDb7j8QH9kCtMTyKujuxK5AAbu0CicT7sHUvS5clQwx0fIACR0L3eQUmh6gvBxWJ1-PMudurn52zFtj9DdY8PymT9RGDyST9jQ). Then fill in the table below.

Ho:

H1:

Type of test statistic (chi square, F, T, Z) degrees of freedom\_\_\_

The value of the test statistic (round to at least two decimal places)\_\_

The p-value (round to at least two decimal places)\_\_\_