

Name: _____ Hour: _____ Date: _____



Which grade is more likely to go to prom?



The student council at a large high school is wondering if Juniors or Seniors are more likely to attend Prom. They take a random sample of 50 Juniors and find that 28 are planning on attending Prom. They select a random sample of 45 Seniors and 29 are planning on attending.

Do the data provide convincing evidence that a higher proportion of Seniors are going to prom than Juniors? Use a 5% significance level.

STATE: Parameter:

Statistic:

Hypotheses:

Significance level:

PLAN: Name of procedure:

Check conditions:

DO: Mean:

Picture:

Standard deviation:

General Formula:

Specific Formula:

Work:

Test statistic:

P-value:

CONCLUDE:

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Significance Tests About a Difference in Proportions

Important ideas:

Check Your Understanding

To study the long-term effects of preschool programs for poor children, researchers designed an experiment. They recruited 123 children who had never attended preschool from low-income families in Michigan. Researchers randomly assigned 62 of the children to attend preschool (paid for by the study budget) and the other 61 to serve as a control group who would not go to preschool. One response variable of interest was the need for social services as adults. Over a 10-year period, 38 children in the preschool group and 49 in the control group have needed social services.

1. Do these data provide convincing evidence that preschool reduces the later need for social services for children like the ones in this study? Justify your answer.