

Name: \_\_\_\_\_ Hour: \_\_\_\_\_ Date: \_\_\_\_\_

**CLASS OF  
2020**

**CLASS OF  
2021**

## 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:**

Name: \_\_\_\_\_ Hour: \_\_\_\_\_ Date: \_\_\_\_\_

## Tests About a Difference in Proportions

Important ideas:

### Check Your Understanding

Did you sleep with a comfort object as a child? Do you still? No need to stuff that teddy bear from your infant years in your closet the next time you have a guest over—the odds are good that he or she has a comfort object, too. A study conducted by Sleepopolis and OnePoll reported that 34% of adults still sleep with a stuffed animal, blanket, or other sentimental object, according to a survey of a random sample of 100 adults. A similar study, based on a random sample of 80 children reports that 75% of children sleep with a comfort object.

Do these data provide convincing evidence that the proportion of adults who sleep with a comfort object is less than the proportion of children who sleep with a comfort object? Justify your answer.