In Exercises 5–8, identify the indicated values or interpret the given display. Use the normal distribution as an approximation to the binomial distribution (as described in Part 1 of this section). Assume a 0.05 significance level and answer the following:

a. Is the test two-tailed, left-tailed, or right-tailed?

b. What is the test statistic?

c. What is the *P*-value?

d. What is the null hypothesis, and what do you conclude about it?

e. What is the final conclusion?

TI-83/84 PLUS

```
1-PropZTest
prop<.1
z=-1.942721717
p=.0260248259
p̂=.0649819495
n=277
```

5. Adverse Reactions to Drug The drug Symbicort is used to treat asthma. In a clinical trial of Symbicort, 18 of 277 treated subjects experienced headaches (based on data from AstraZeneca). The accompanying TI-83/84 Plus calculator display shows results from a test of the claim that less than 10% of treated subjects experienced headaches.

6. Guns in the Home In a Gallup poll of 1003 randomly selected subjects, 373 said that they have a gun in their home. The accompanying Minitab display shows results from a test of the claim that 35% of homes have guns in them.

MINITAB

```
Test of p = 0.35 vs p not = 0.35

Variable   X    N Sample p        95% CI        Z-Value P-Value
Guns     373 1003 0.371884 (0.341974, 0.401795)    1.45   0.146
```

7. Brand Recognition A PriceGrabber.com survey of 1631 randomly selected adults showed that 555 of them have heard of the Sony Reader. The following STATDISK display results from a test of the claim that 35% of adults have heard of the Sony Reader.

STATDISK

Sample proportion:	0.340282
Test Statistic, z:	−0.8228
Critical z:	±1.9600
P-Value:	0.4106

8. Public Speaking A TNS poll of 1000 randomly selected adults showed that 460 of them say that public speaking is an activity that they dread most. Shown next is the StatCrunch display resulting from a test of the claim that fewer than half of adults say that public speaking is the activity that they dread most.

STATCRUNCH

Hypothesis test results:

p : proportion of successes for population

H_0 : p = 0.5

H_A : p < 0.5

Proportion	Count	Total	Sample Prop.	Std. Err.	Z-Stat	P-value
p	460	1000	0.46	0.015811387	-2.529822	0.0057

Testing Claims About Proportions. ***In Exercises 9–32, test the given claim. Identify the null hypothesis, alternative hypothesis, test statistic, P-value or critical value(s), conclusion about the null hypothesis, and final conclusion that addresses the original claim. Use the P-value method unless your instructor specifies otherwise. Use the normal distribution as an approximation to the binomial distribution (as described in Part 1 of this section).***

9. Mendelian Genetics When Mendel conducted his famous genetics experiments with peas, one sample of offspring consisted of 428 green peas and 152 yellow peas. Use a 0.01