

**Name:**

**Statistics**

**Date:**

**Practice Quiz 6-C**

1. Mathematically, what is special about the estimate of sample size needed for a confidence interval when an estimate of  $p = .50$  is used?

*If  $p$  is .50 then  $q$  is also .50.*

2. Lila plans to count the number of Skittles in each 8-ounce bag, and to see what proportion of them are orange. Use  $c = .90$ .

a) If she uses 10 bags in her sample and  $\sigma = 5.9$ , what will be her margin of error for the number of Skittles per bag?

*Use the formula for  $E$ .*

b) Given  $\sigma = 5.9$ , how many bags should she count if she wants the margin of error for the number of Skittles per bag to be only 2.5?

*This is for a mean.*

c) If there are a total of 550 Skittles in her sample, what is the largest her margin of error can be for the proportion of orange Skittles?

*See #1.*

d) How many Skittles should she have in her sample if she wants the margin of error for the proportion of orange Skittles to be only 2.0%?

*This is for a proportion.*