

## Sampling Triptych

Population	Probability Model	Sample
Unit: Candy Size: 160	Method: SRS Size: 16	Indices: Sample:
Info:		
Parameter: $\pi =$	Statistic: Sample Proportion Expected value:	Statistic:
Population SD:		Sample SD:
	Standard Error:	$\widehat{SE}$ : Conf Int:

The Triptych template for a simple random sample from a 0-1 population. Each unit in the population is either a 0 or 1 denoting the presence or absence of a characteristic. In this example I know all the population values, but you do not. We can compare your estimate of the population proportion to the truth using a confidence interval.

### Notation

- $\pi =$
- $z_i =$
- $E(z_{I_1})$
- $Var(z_{I_1})$
- $\hat{\pi}$
- $SE(\hat{\pi})$
- $\hat{SE}(\hat{\pi})$

Sample	proportion	sample SD	$\hat{SE}$	Confidence Interval
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Sample	proportion	sample SD	$\hat{SE}$	Confidence Interval
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

To help you with your calucaltions:

$2/16 = 0.125$	$\hat{SE} = 0.08$
$3/16 = 0.1875$	$\hat{SE} = 0.095$
$4/16 = 0.25$	$\hat{SE} = 0.106$
$5/16 = 0.3125$	$\hat{SE} = 0.114$
$6/16 = 0.375$	$\hat{SE} = 0.119$
$7/16 = 0.4375$	$\hat{SE} = 0.122$
$8/16 = 0.5$	$\hat{SE} = 0.122$
$9/16 = 0.5615$	$\hat{SE} = 0.122$