

Hypothesis Testing about $p_1 - p_2$

Select the **STAT** button, screen 1 should appear.

Select **TESTS**, screen 2 should appear.

Select **6: 2-PropZTest...**, screen 3 should appear.

On screen 3, x_1 represents the number of successes in the first population (this must be a whole number), n_1 is the number of trials in population 1, x_2 represents the number of successes in the second population (this must be a whole number), n_2 is the number of trials in population 2, select the correct alternative hypothesis

After entering all of this information select **Calculate** and the information will be displayed, screen 4.

```

STAT  CALC  TESTS
1: Edit...
2: SortA(
3: SortD(
4: ClrList
5: SetUpEditor
    
```

Screen 1

```

EDIT  CALC  TESTS
1: Z-Test...
2: T-Test...
3: 2-SampZTest...
4: 2-SampTTest...
5: 1-PropZTest...
6: 2-PropZTest...
7: ZInterval...
    
```

Screen 2

```

2-PropZTest
x1: 27
n1: 30
x2: 23
n2: 30
P1: ≠P2 <P2
Calculate Draw
    
```

Screen 3

```

2-PropZTest
P1 > P2
z = 1.385640646
P = .0829283848
p1 = .9
p2 = .7666666667
↓ p̂ = .8333333333
    
```

Screen 4

Notes: If the problem gives p , calculate x by multiplying np and rounding to the nearest whole number.

On screen 4, the z value is the test statistic, the p is the p -value or observed significance level, and \hat{p} is equivalent to the sample proportion.