
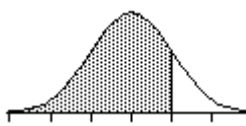




# How to Solve z-Score Area Problems

Your book has two tables –

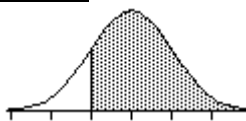
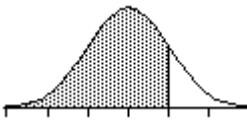
the “TAIL” table  and the “BIG” table .

**REMEMBER:** The whole normal curve has an area of **1.0000**, and each half is **.5000**

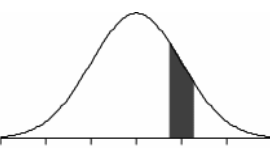
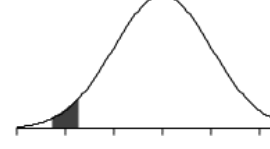
## “Tail” Problems

- $z > \text{POSITIVE}$  
- $z < \text{NEGATIVE}$  
- Just look up in “tail” table.
  - Example:  $z > 2.41 \rightarrow$  **.0080**
  - Example:  $z < -1.19 \rightarrow$  **.1170**

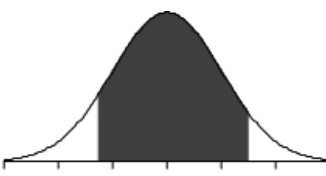
## “Over Half” Problems

- $z > \text{NEGATIVE}$  
- $z < \text{POSITIVE}$  
- Just look up in “big” table.
  - Example:  $z > -0.48 \rightarrow$  **.6844**
  - Example:  $z < 2.22 \rightarrow$  **.9868**

## “Same Side” Problems

- $\text{POSITIVE} < z < \text{POSITIVE}$   (between two positive numbers)
- $\text{NEGATIVE} < z < \text{NEGATIVE}$   (between two negative numbers)
- Look up both numbers in **either** table. (The example uses the “big” table.)
- Subtract (BIG – SMALL) to get answer.
  - Example:  $1.23 < z < 2.34 \rightarrow$   $.9904 - .8907 =$  **.0997**
  - Example:  $-1.91 < z < -0.34 \rightarrow$   $.9719 - .6331 =$  **.3388**

## “Both Sides” Problems

- $\text{NEGATIVE} < z < \text{POSITIVE}$   (between a negative and a positive)
- Look up both numbers in “tail” table
- Subtract both tails from 1 ...  $1 - \text{FIRST} - \text{SECOND}$ 
  - Example:  $-2.11 < z < 1.22 \rightarrow$   $1 - .0174 - .1112 =$  **.8714**