Z-SCORE SUMMARY

This is what we were doing during the basketball tournaments.

To find z-scores, use the formula $z = \frac{x-\bar{x}}{s}$.

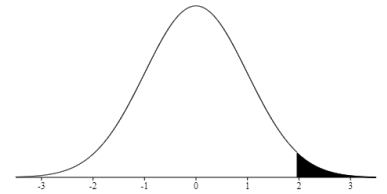
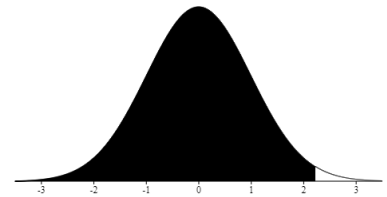
- Subtract number minus mean.
- Divide by standard deviation.
- If you know the z-score and need to find the raw score, plug in for "z", and solve for "x".

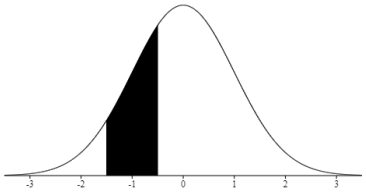
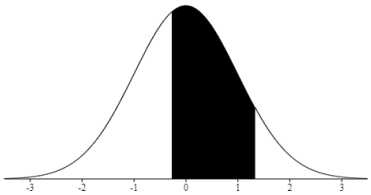
Nature of z-scores:

- Positive z-scores are **above** average.
- Negative z-scores are **below** average.
- If z = 0, it's exactly **average**.

Area/Probability problems:

- Tail problems (less than half the curve) – just look up in "tail" table.
- Big problems (more than half the curve) – just look up in "big" table.
- Same side problems (both Z-scores have same sign)
  - Look up in same table, and subtract.
- Both sides problems (one positive and one negative Z-score)
  - Look up in same table.
  - Take 1 – first answer – second answer
- Examples:

 To the right of Z = 1.96	Tail table ➔ **.0250**
 To the left of Z = 2.22	Big table ➔ **.9868**

 Between Z = -1.50 and Z = 0.50	.3085-.0668 .2417
 Between Z = -0.27 and Z = 1.33	1-.3936-.0918 .5146