6.7: Formula Review

6.1: Introduction

$X \sim N(\mu, \sigma)$

$\mu =$ the mean; $\sigma =$ the standard deviation

6.2: The Standard Normal Distribution

$Z \sim N(0, 1)$

$z =$ a standardized value (z-score)

mean $= 0$; standard deviation $= 1$

To find the observed value, x, when the z-scores is known:
$x = \mu + (z)\sigma$

z-score: $z = \dfrac{x - \mu}{\sigma}$ or $z = \dfrac{|x - \mu|}{\sigma}$

$Z =$ the random variable for Z-scores

$Z \sim N(0, 1)$

6.4: Estimating the Binomial with the Normal Distribution

Normal Distribution: $X \sim N(\mu, \sigma)$ where μ is the mean and σ is the standard deviation.

Standard Normal Distribution: $Z \sim N(0, 1)$.