

## 6.6: Chapter Review

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### [6.2 The Standard Normal Distribution](#)

A z-score is a standardized value. Its distribution is the standard normal,  $Z \sim N(0, 1)$ . The mean of the z-scores is zero and the standard deviation is one. If  $z$  is the z-score for a value  $x$  from the normal distribution  $N(\mu, \sigma)$  then  $z$  tells you how many standard deviations  $x$  is above (greater than) or below (less than)  $\mu$ .

### [6.4 Estimating the Binomial with the Normal Distribution](#)

The normal distribution, which is continuous, is the most important of all the probability distributions. Its graph is bell-shaped. This bell-shaped curve is used in almost all disciplines. Since it is a continuous distribution, the total area under the curve is one. The parameters of the normal are the mean  $\mu$  and the standard deviation  $\sigma$ . A special normal distribution, called the standard normal distribution is the distribution of z-scores. Its mean is zero, and its standard deviation is one.

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