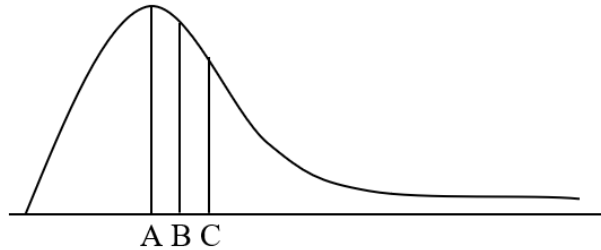


Introduction to the Normal Curve

CREDIT: The questions on this document were written by Erik Packard, PhD, Associate Professor of Mathematics at Colorado Mesa University.

- Problem 2



- Consider the probability density curve shown above. Which letter(s) (A, B, and C) represent the mean and median? Note there is no reason that the mean and median could not be the same.
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- Problem 6
 - ACT math scores are roughly a normal distribution with a mean of 21.0 and a standard deviation of 4.7. SAT math scores are roughly a normal distribution with a mean of 515 and a standard deviation of 114. Tanya scores 530 on the SAT math, and Natalie scores 22 on the ACT math. Assuming both tests measure the same thing, who has the higher score?
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- Problem 11
 - Biological measurements on the same species often follow a Normal distribution quite closely. The weights of seeds of a variety of winged bean are approximately Normal with a mean of 525 mg and a standard deviation of 110 mg.
 - A) What percent are over 500 mg?
 - B) What is the range for the highest 10%?
 - C) What is the range for the lowest 5%?
 - D) What is the range for the middle 90%?
 - E) What percent are under 510 mg?
 - F) What percent are between 500 mg and 600 mg?