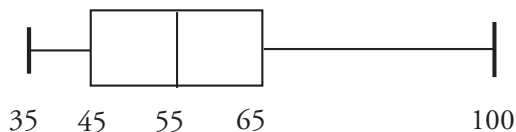


Comprehensive Statistics and Sets Drill

The answers can be found in Part IV.

Scores on test A



3. If 400 students took test A and their score distribution is shown above, then how many students scored between 65 and 100 on test A?
- (A) 25
 (B) 45
 (C) 75
 (D) 100
 (E) 140

3	0 0 0 1 1 2 2 2 8 9
4	0 5
5	1
6	1 7 8
7	2 2
8	8
9	0

4. What is the median of the data represented in the stem-and-leaf graph shown above?
- (A) 30
 (B) 39
 (C) 39.5
 (D) 48.95
 (E) 60

Wallburn County Sewage Treatment Plant
E. coli bacteria count per 1 L, week of April 15th

Sunday, April 15 th	1,222,430
Monday, April 16 th	4,220
Tuesday, April 17 th	654
Wednesday, April 18 th	23,444
Thursday, April 19 th	777,777
Friday, April 20 th	22
Saturday, April 21 st	43,221

14. In the chart above, for how many days was the *E. coli* bacteria count per 1 L within 30,000 of the mean count for the week?
- (A) Zero
 (B) One
 (C) Two
 (D) Three
 (E) Four
15. Which of the following sets has the smallest standard deviation?
- (A) {14, 14, 14, 14}
 (B) {0, 2, 4}
 (C) {-8, 0, 8, 16, 32}
 (D) {-3, -2, -2, -1}
 (E) {-500, 500}
16. 350 people bought popcorn, soda, or both at a movie theater. If 179 people bought popcorn and 57 people bought both popcorn and soda, how many more people bought only soda than bought only popcorn?
- (A) 49
 (B) 114
 (C) 122
 (D) 171
 (E) 228

18. Don has a collection of 14 fedoras. Don wants to wear a different fedora to work every day this week, Monday through Friday. How many different ways could Don wear his fedoras to work this week?
- (A) 2,002
 (B) 240,240
 (C) 537,824
 (D) 17,297,280
 (E) 105,413,504
23. A college radio station has 10 punk records, 6 crunk records, and 12 funk records. If three records are to be played in order at random without repeating any record, then what is the probability that a crunk, punk, and funk record are played in that order?
- (A) $\frac{1}{21,952}$
 (B) $\frac{45}{1,372}$
 (C) $\frac{10}{273}$
 (D) $\frac{5}{34}$
 (E) $\frac{1}{3}$
27. The rules of a coed basketball league require that a team have 2 men and 3 women on the court at a time. If Team Awesome has 7 men and 5 women, then how many different groups of men and women can Team Awesome have on the court?
- (A) $\frac{7!}{2!5!} \times \frac{5!}{3!2!}$
 (B) $\frac{7!}{8!} \times \frac{5!}{4!}$
 (C) $\frac{7!}{5!} \times \frac{5!}{2!}$
 (D) $\frac{7!}{2!} \times \frac{5!}{3!}$
 (E) $\frac{12!}{7!}$
32. The probability that Jerry wins his first fencing match is 0.57. The probability that Jerry wins his second fencing match is 0.94. What is the probability that Jerry wins at least one of these two fencing matches?
- (A) 0.54
 (B) 0.94
 (C) 0.97
 (D) 1.48
 (E) 1.51
38. Laura Jane has a deck of 40 cards numbered 1-40. The first card she draws is numbered 8. Then she draws a second card and determines that the third card she draws will have a 50% chance of having a number between the first and second card she drew. What number was on Laura Jane's second card?
- (A) 19
 (B) 20
 (C) 27
 (D) 28
 (E) 29
43. A jar contains 32 pennies, 21 nickels, and 22 dimes. If three coins are chosen at random, what is the probability that the combined value of those coins is greater than 6 cents? (Note: pennies are worth 1 cent, nickels are worth 5 cents, and dimes are worth 10 cents.)
- (A) 0.0759
 (B) 0.0777
 (C) 0.1828
 (D) 0.9223
 (E) 0.9266