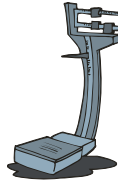
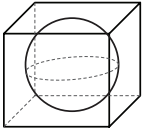




# Workout 5



141. \_\_\_\_\_ pounds A man who initially weighed 220 pounds completed a diet-and-exercise program. After the 12-week program, his body fat percentage had dropped from 30% to 20%, and his weight had dropped to 200 pounds. If every part of his body that is not fat or muscle has a constant weight of 120 pounds, how many pounds of muscle did he gain during the program?
142. \_\_\_\_\_ cm A piece of paper is 0.1 mm thick. It is folded in half and then cut along the fold line. The cut pieces then are stacked one on top of the other. This folding and cutting process is completed a total of 10 times. If all of the pieces are stacked on top of each other, how many centimeters tall will the stack be? Express your answer as a decimal to the nearest hundredth.
143. \_\_\_\_\_ The number 34 is removed from a set of five numbers with a mean of 20. What is the mean of the remaining four numbers? Express your answer as a decimal to the nearest tenth.
144. \_\_\_\_\_ people The population of Big City has always doubled every 5 years. If the current population is 25,600 people, what was Big City's population 20 years ago?
145. \$ \_\_\_\_\_ Kara bought 1 package of cookies and 4 popsicles for \$3.59. Cam bought 5 packages of cookies and 2 popsicles for \$12.55. How much will it cost to buy both a package of cookies and a popsicle?
146. \_\_\_\_\_ in<sup>2</sup>  A sphere has a radius of 4 inches. What is the surface area of the smallest cube that could circumscribe the sphere?
147. \_\_\_\_\_ What is the positive difference between the mean and the median of the squares of the first 10 positive integers?
148. \_\_\_\_\_ % A department store advertises that it has reduced its prices by 10%, then reduced the lower prices by 20%, then by 30%, then by 40%. What single percent discount would yield the same final price? Express your answer to the nearest hundredth.
149. \_\_\_\_\_ numbers Each Dance-A-Thon contestant has a three-digit ID number that is divisible by 8. If the tens and units digits cannot be the same, what is the maximum number of contestants' numbers that can have 4 as the hundreds digit?
150. \_\_\_\_\_ A unit fraction is a fraction whose numerator is 1 and whose denominator is a natural number greater than 1. If three unit fractions with distinct single-digit denominators have a sum of  $\frac{5}{8}$ , what is the sum of the denominators?

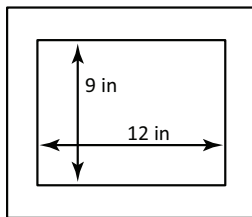


# Workout 6

171. \_\_\_\_\_ turns Juwan played a game in which he could score either 11 or 16 points on each turn. Juwan scored exactly 175 points. How many turns did Juwan take?
172. \_\_\_\_\_ % The stock exchange index went up 3.76% on Monday, down 4.25% on Tuesday, down 1.16% on Wednesday, up 2.12% on Thursday and down 5.38% on Friday. What was the net percent that the stock exchange index was down for the week? Express your answer to the nearest hundredth.
173. \_\_\_\_\_ % A company's budget increased from \$29 million to \$133 million over a period of 10 years, growing by the same percent each year. What was the annual percent increase? Express your answer to the nearest hundredth.

174. \_\_\_\_\_ Jorge has a bag with 6 red marbles and 12 blue marbles. He randomly selects 4 marbles from the bag, one at a time without replacement. What is the probability that he selects 2 red marbles followed by 2 blue marbles? Express your answer as a common fraction.

175. \_\_\_\_\_ inches



A 9-inch  $\times$  12-inch rectangular picture is framed by a border of uniform width. The combined area of picture plus border is  $180 \text{ in}^2$ . In inches, what is the width of the border? Express your answer as a decimal to the nearest tenth.

176. \_\_\_\_\_ ounces On average, a bushel of corn contains 72,800 kernels and weighs 56 pounds. There are 16 ounces per pound, and an average ear of corn contains 650 kernels. In ounces, how much do the kernels from one average ear of corn weigh?
177. \_\_\_\_\_ A set of six consecutive positive integers is divided into three groups of two numbers each. The sum of the numbers in each group is 31. What is the least possible product of the two numbers within one of the groups?
178. \_\_\_\_\_ If  $x + y = 2$  and  $x^2 + y^2 = 34$ , what is the value of  $x^3 + y^3$ ?
179. \$ \_\_\_\_\_ A lottery ticket costs 50 cents and contains four distinct numbers from 1 to 20, inclusive. How much money would a person need to spend to buy a lottery ticket for every possible combination of four numbers?
180. \_\_\_\_\_ teachers At Gauss Middle School, the current student-to-teacher ratio is 17.5:1. The school currently has 560 students. Next year, the student-to-teacher ratio must be 19:1. If the school gains 10 students, how many fewer teachers will be needed next year?