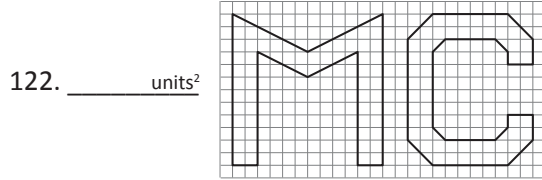




Warm-Up 9

121. _____ A bag contains three quarters, two dimes and a nickel. If two coins are randomly drawn without replacement, what is the probability that both coins are the same denomination? Express your answer as a common fraction.



If the area of the C in this logo is 58 units², what is the area of the M?

123. _____ eighth graders There were 42 eighth graders who voted to go to Washington, D.C. for a class trip. This represents $\frac{2}{9}$ of the students in eighth grade. How many eighth graders did not vote for the class trip to Washington, D.C.?

124. _____ The mean of five different integers is 30. If the smallest integer is 7, what is the greatest possible value of any of the integers?

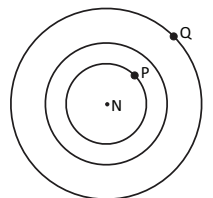
125. _____ If $f(x) = g(x) + 2$, and $g(x) = \frac{1}{2}f(x)$, what is the value of $f(2013)$?

126. _____ cars
-
- There are 20 cars in Lot A, and there are 20 more cars in Lot B than there are in Lot C. If there are a combined total of 100 cars parked in all three lots, how many cars are in Lot C?

127. _____ If $w = x + y + z$, what is the arithmetic mean of w , x , y and z in terms of w ? Express your answer as a common fraction.

128. _____ degrees What is the degree measure of an angle whose supplement is three times as large as its complement?

129. _____ cm The three concentric circles shown have center N and diameters of 16 cm, 12 cm and 10 cm. Points N, P and Q are collinear. What is the distance from point P to point Q?



130. _____ If x and y are real numbers such that $x^2 = y^2$ and $x \neq y$, what is the value of $x^2 + 2(x + y) - y^2 + 8$?

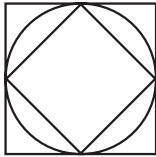


Warm-Up 10

131. _____ degrees If the sum of the supplement and complement of an acute angle is equal to 7 times the angle, what is the degree measure of the acute angle?

132. _____ Julius found three sheets of paper torn from a book, each with page numbers on both sides. If three of these page numbers were 1, 82 and 93, what is the sum of the page numbers on the other sides of the three sheets?

133. _____ units²



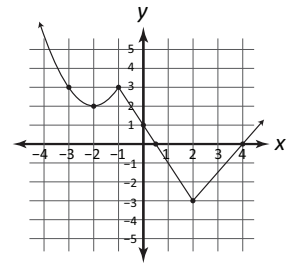
When a circle is inscribed in a square of side length 2 units, the four points of intersection between the circle and square are the vertices of a smaller square. What is the positive difference between the area of the circle and the area of the smaller square? Express your answer in terms of π .

134. _____ ways Five people are arranged in a line. In how many ways can they be arranged in a different order so that each person is standing beside at least one person he or she originally stood beside?

135. _____ candies Forty-eight candies are divided into two piles. The candies in the first pile are placed six to a bag, and the candies in the second pile are placed three to a bag. If a total of nine bags are used, how many candies are in the larger of the two piles?

136. _____ years old Maria is exactly 10 years older than Abe. Four years ago, Maria was twice as old as Abe was then. What is Maria's age now?

137. _____ In the graph shown, if $f(-2)=p$ and $f(p)=r$, what is the value of $r+f(-1)$?



138. _____ integers For $f(x) = 2x + 2$, the domain is $\{0, 1, 2, \dots, 9, 10\}$. How many integers are in both the domain and the range of f ?

139. _____ The sum of three consecutive integers is 24. What is the product of the three integers?

140. _____ cm The length of each edge of a cube is 10 cm, and point K is placed at the center of a face of the cube. A line is drawn through the cube, as shown, from point K to point J, a vertex of the cube on the opposite face. What is the length of \overline{KJ} ? Express your answer in simplest radical form.

