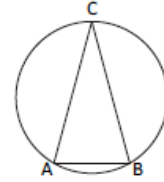


# Workout 6



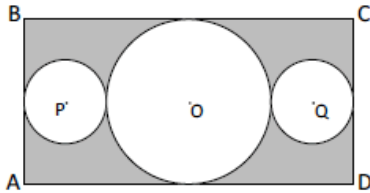
171. 78 pennies Mollie has fewer than 100 pennies. If she puts the pennies in stacks of five, there are three pennies left over. If Mollie puts them in stacks of seven, there is one penny left over. If she puts them in stacks of three, there are no pennies left over. What is the total number of pennies Mollie has?

172. 30 degrees Isosceles triangle ABC, shown here, is inscribed in a circle, and base AB of the triangle is equal in length to the radius of the circle. What is the degree measure of  $\angle C$ ?



173. \$ 18.50 The price of a shirt was reduced by 20%. Including the 5% sales tax, Cyndi paid \$15.54 for the shirt. What was the original price of the shirt before the discount was applied?

174. 52.6 In the figure shown, circles P and Q are congruent, and the radius of circle O is twice that of each of the smaller circles. Circle P is tangent to rectangle ABCD at the midpoint of  $\overline{AB}$ , and circle Q is tangent to rectangle ABCD at the midpoint of  $\overline{CD}$ . Circle O is tangent to each of the smaller circles and is tangent to two sides of rectangle ABCD. If the radius of circle O is 4 in, what is the total area of the shaded regions? Express your answer as a decimal to the nearest tenth.



175. 17 The four positive integers P, Q, P + Q and P - Q are all prime and their sum is S. What is the value of S?

176. 11.3 mi/h A square measures 80 yd on a side. Bob and Rob begin running from the same corner. Bob runs along a side to an adjacent corner, and Rob runs along a diagonal to an opposite corner. They arrive at their respective corners at the same time. If Bob's speed was 8 mi/h, what was Rob's speed? Express your answer as a decimal to the nearest tenth.

177. 2 intgrs For how many positive integers  $n$  is the mean of the set  $\{9, 5, 10, 12, n\}$  equal to its median?

178. 33/50 Students were asked to vote for one of the five choices listed for the new school mascot. Based on this data, what is the probability that a student selected at random from those who voted will be a student who did not vote in favor of Grizzly Bear as the school mascot? Express your answer as a common fraction.

Mascot	Number of Votes
Grizzly Bear	68
Bull Dog	12
Bald Eagle	24
Wildcat	44
Panther	52

179. 12 factors How many positive integer factors does 96 have?

180. 80 units<sup>2</sup> What is the area of the quadrilateral whose vertices are  $(4, -4)$ ,  $(-4, 2)$ ,  $(6, 7)$  and  $(10, -1)$ ?