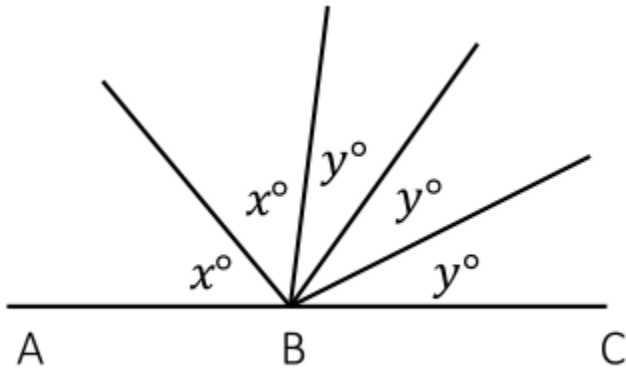
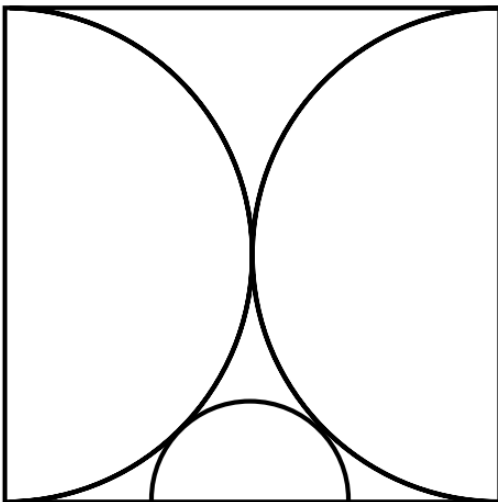


Geometry

If ABC is a straight line as shown in the figure below, and the angles x & y are integer multiples of 20, what is the value of x ?



- A 20°
- B 40°
- C 60°
- D 80°
- E 100°



In the square shown above, the side is 4 units. The three semicircles with their diameters along the sides of the square touch each other as shown. What is the diameter of the smaller semicircle?

A $\sqrt{2} - 1$

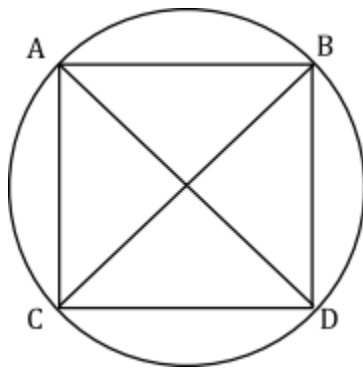
B $2\sqrt{2} - 2$

C $\sqrt{2}$

D $4\sqrt{2} - 4$

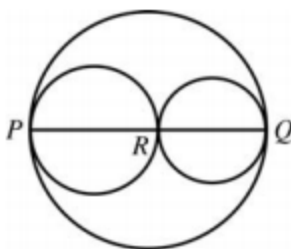
E $\sqrt{3}$

In the figure below, a square ABCD is inscribed in a circle. If the length of arc AB is 4π unit, what is the diameter of the circle?



Numeric Answer:

General Hint: Enter the answer as an integer or a decimal in a single answer box. If two answer boxes are given, enter the answer as a fraction, with one box being the numerator and the other being the denominator. Read carefully whether the answer should rounded and make sure you round to the required degree of accuracy. Do not enter any symbols or characters in the box(es) provided.



Three circles with their centers on line segment PQ are tangent at points P , R , and Q , where point R lies on line segment PQ .

Quantity A

Quantity B

- | | |
|--|--|
| 4. The circumference of the largest circle | The sum of the circumferences of the two smaller circles |
|--|--|

-
- (A) Quantity A is greater.
(B) Quantity B is greater.
(C) The two quantities are equal.
(D) The relationship cannot be determined from the information given.