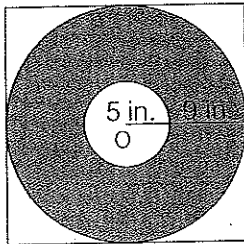


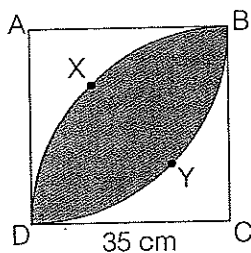
### Challenging Problems

Answer each of the following questions. Show your work and write your statements clearly.

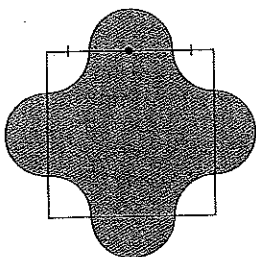
13. Ann pasted a circular piece of paper disc onto a square piece of cardboard. What is the area of the cardboard that is not covered by the disc? (Take  $\pi = 3.14$ )



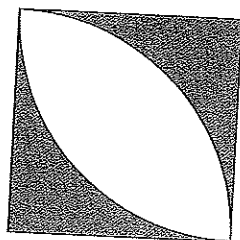
14. In the figure shown, both  $ABYD$  and  $CDXB$  are quadrants. Find the shaded area. (Take  $\pi = \frac{22}{7}$ )



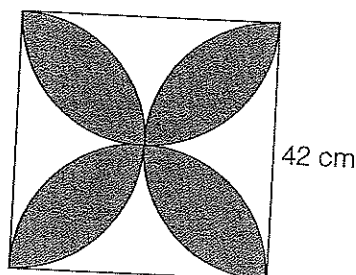
15. In the figure shown, the square has a length of 10 cm and each semi-circle has a diameter of 5 cm. Find the area of the shaded figure. (Take  $\pi = 3.14$ )



16. In the figure shown, two quadrants of the same radius are put on top of each other such that a square 21 cm long is formed. Find the shaded area. (Take  $\pi = \frac{22}{7}$ )



17. In the figure shown, what is the shaded area? (Take  $\pi = \frac{22}{7}$ )



18. The figure shows parts of a circle inscribed within a right-angled triangle. What is the area of the unshaded part? (Take  $\pi = 3.14$ )

