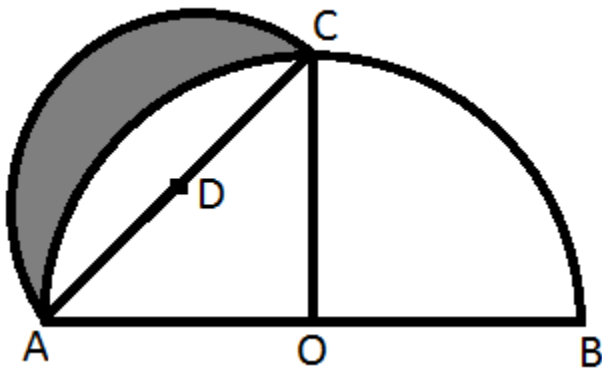


Lunar Area

Let AB be the diameter of a semicircle with center O . Construct OC perpendicular to AB . Let D be the midpoint of AC . Construct a semicircle with center D and diameter AC . Find the area of the shaded region if the length of AB is 12.



Please give your answer as an exact value. For example: π instead of 3.14.