

Computing areas

Sarang S. Sane



# The area of a rectangle



# The area of a rectangle

$b$  {



$$A(c \cdot l, d \cdot b) = c \cdot d \cdot A(l, b).$$

$$A(l, b) = A(l \cdot 1, b \cdot 1) = l \cdot b \cdot A(1, 1)$$

$l$



$A(1, 1)$

$= 1 \text{ sq. unit}$

Area of a rectangle  
 $= l \cdot b \cdot A(1, 1)$   
 $= l \cdot b \text{ sq. units.}$

What happens if we double the length?

$$A(2l, b) = 2 \cdot A(l, b)$$

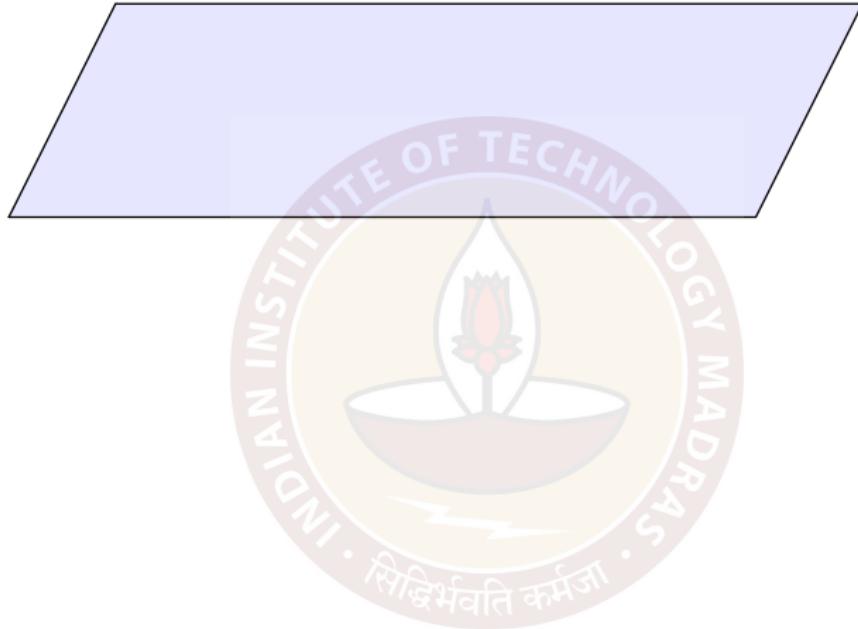
$$A\left(\frac{m}{n}l, b\right) = \frac{m}{n} A(l, b) \quad m, n \in \mathbb{N}$$

$$A(c \cdot l, d \cdot b) = c \cdot d \cdot A(l, b)$$

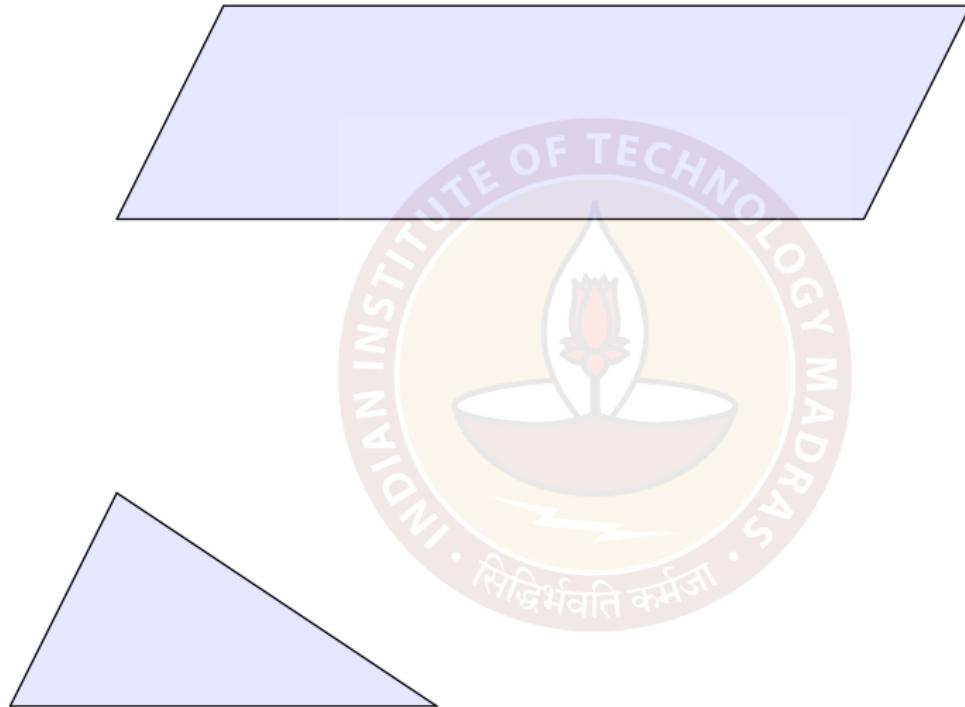
More areas : parallelograms, triangles, trapeziums



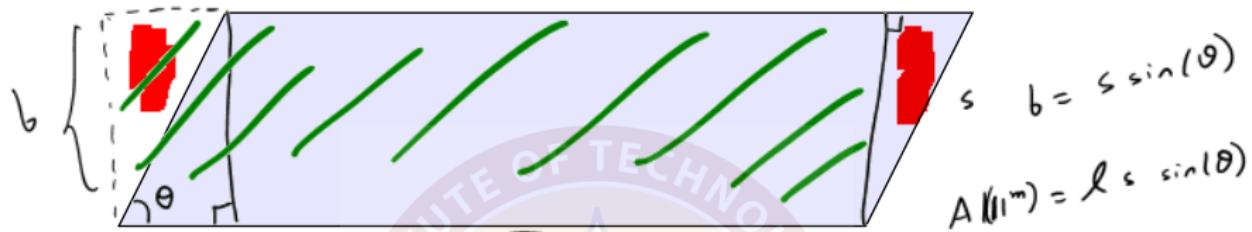
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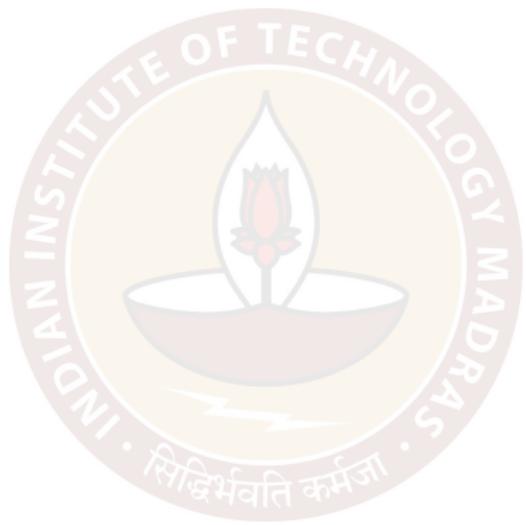
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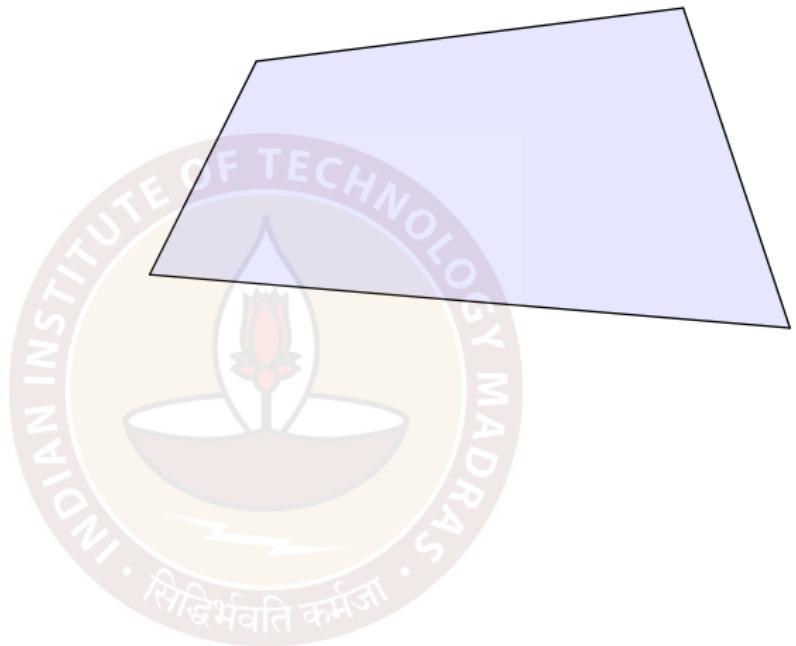
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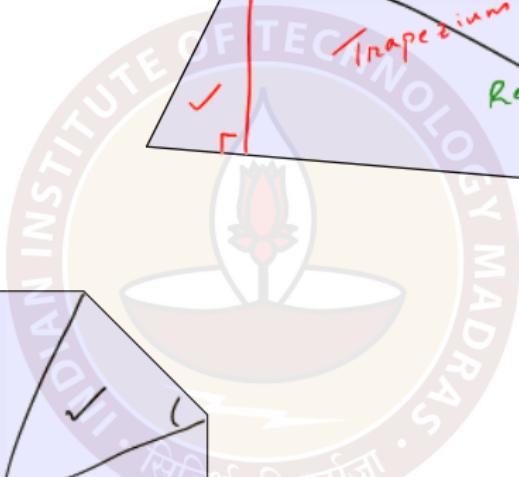
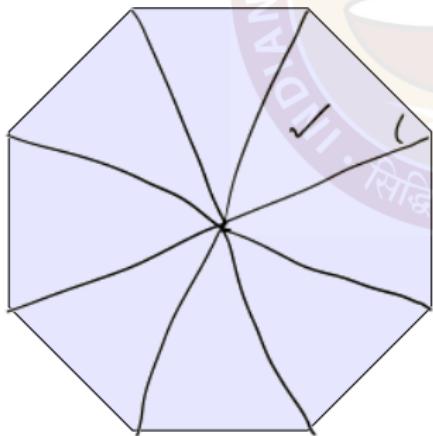
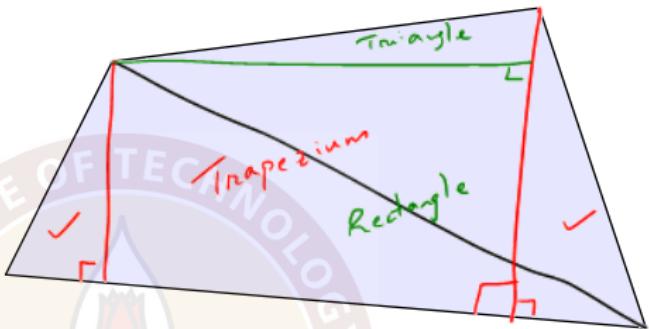
# Quadrilaterals and polygons : Divide and conquer



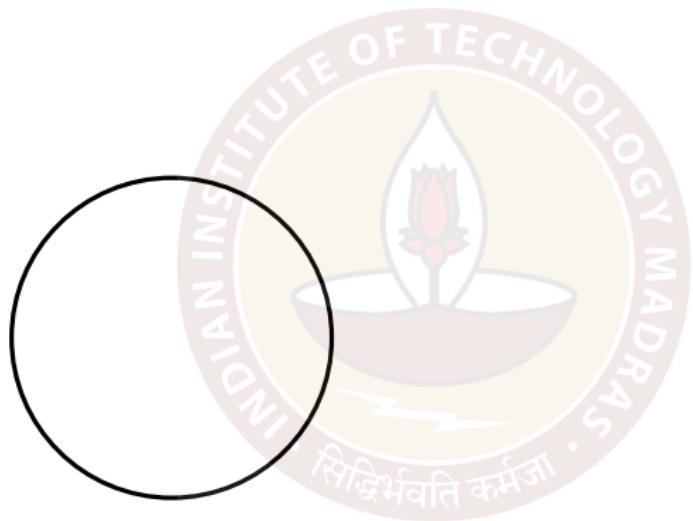
# Quadrilaterals and polygons : Divide and conquer



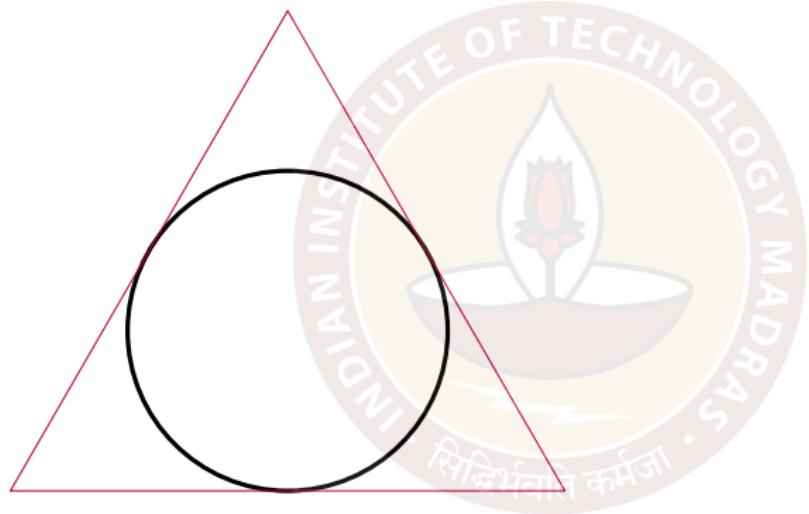
# Quadrilaterals and polygons : Divide and conquer



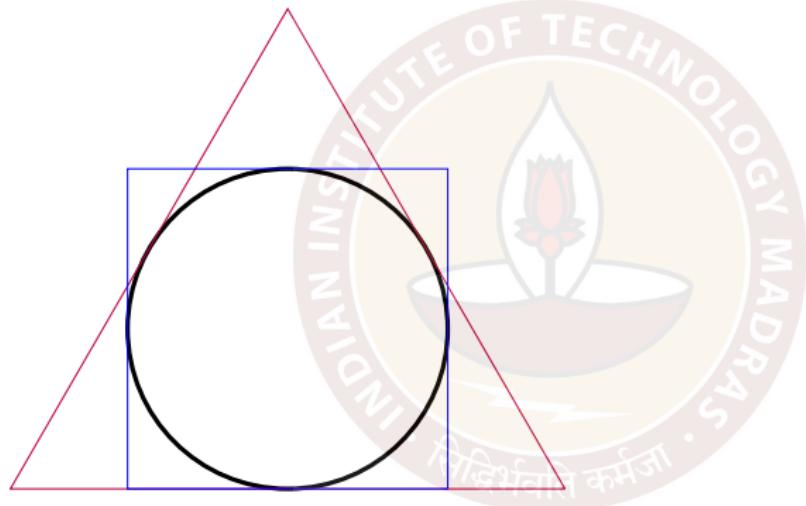
Non-linear shapes : Divide and **gradually** conquer



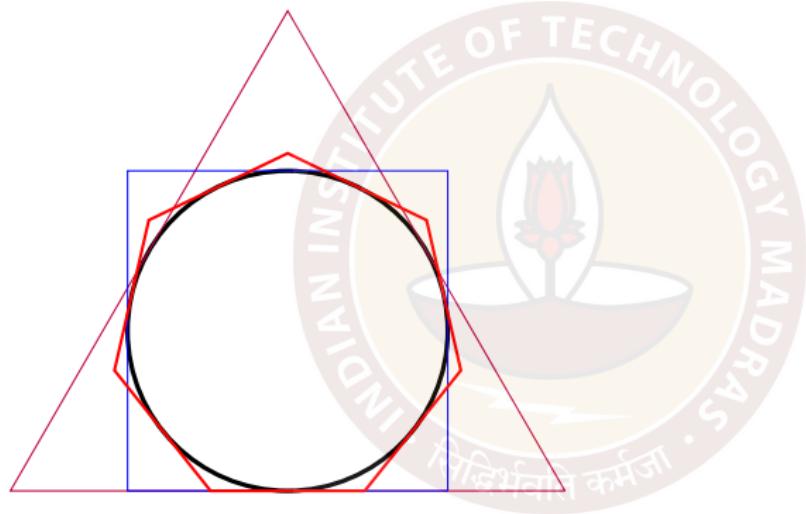
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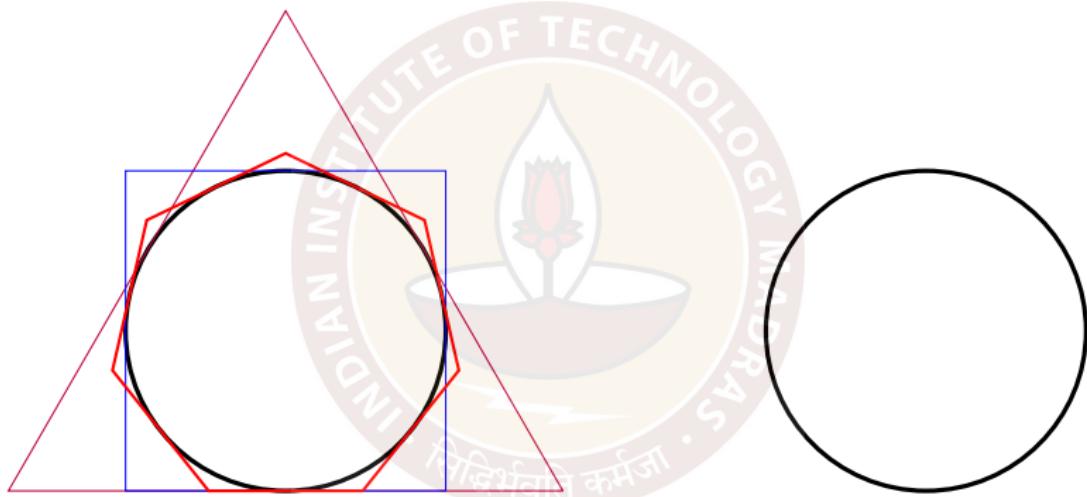
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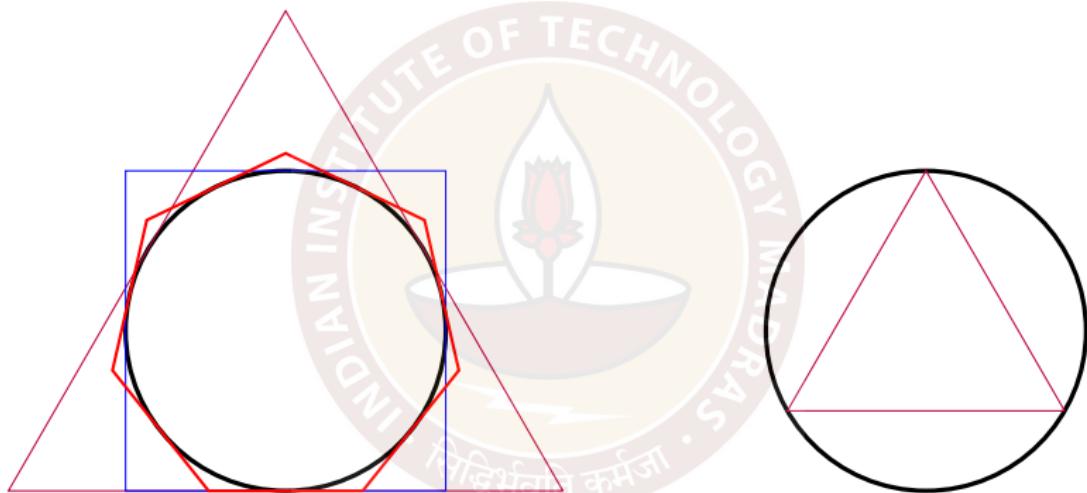
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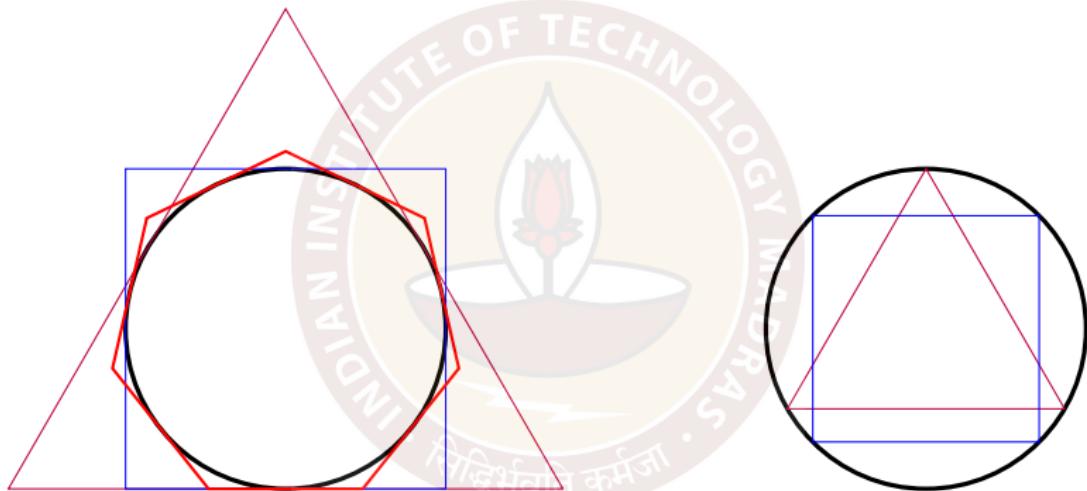
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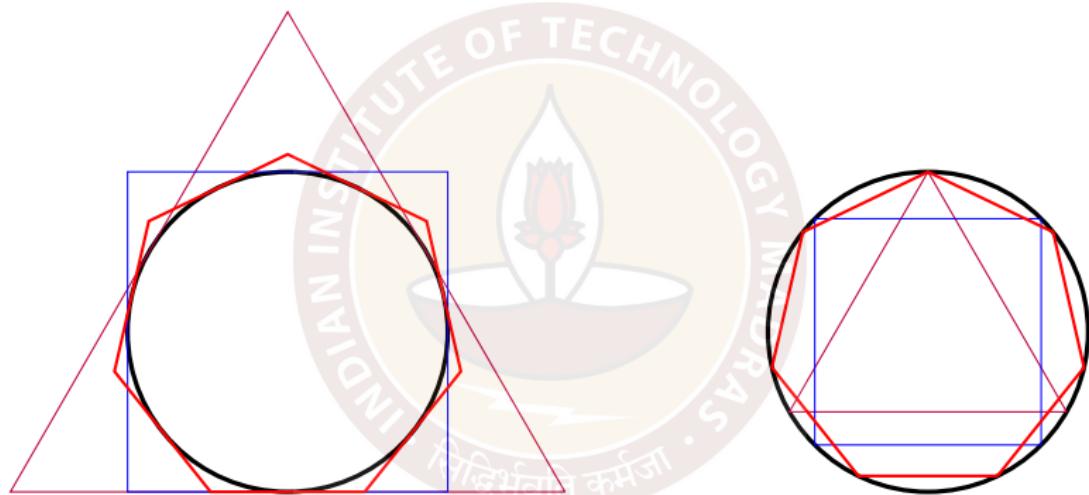
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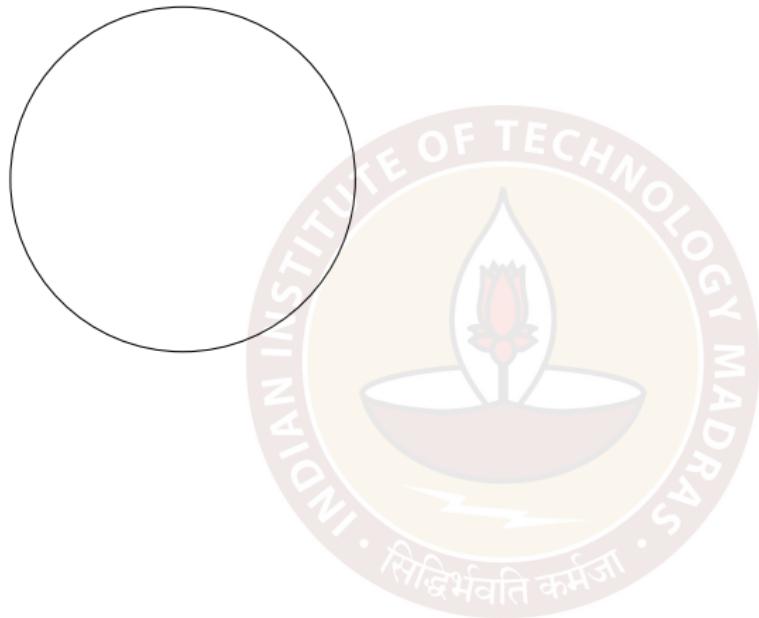


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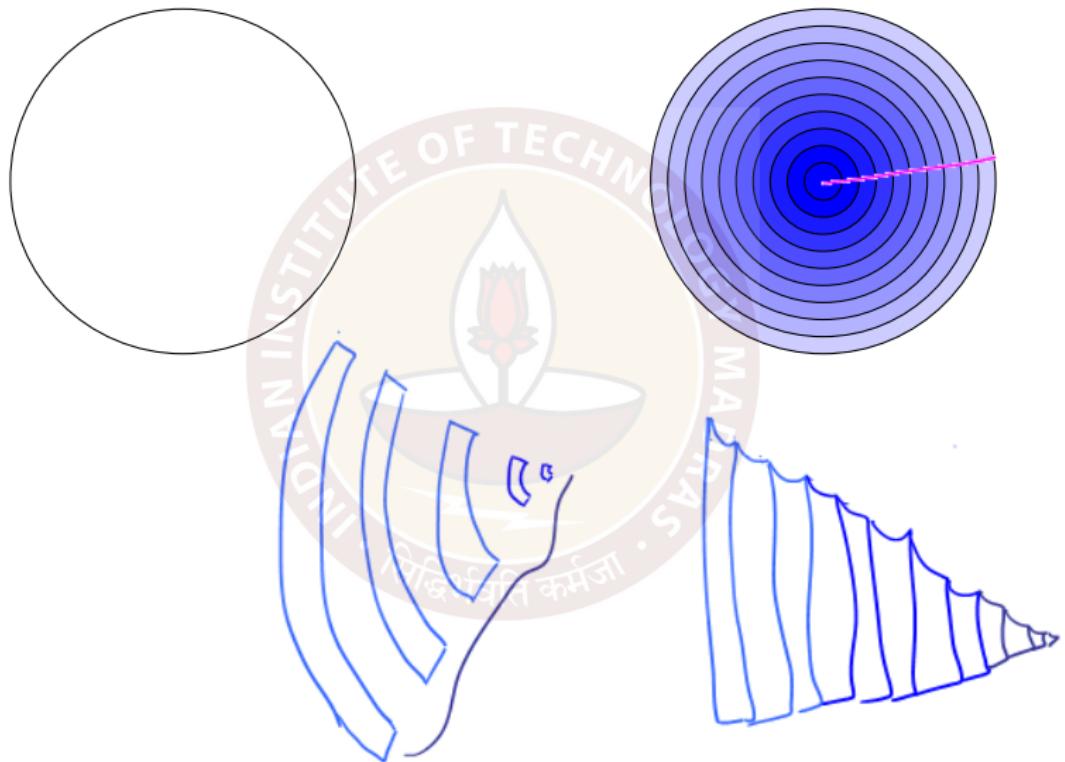


Area of the circle is  $\pi r^2$ .

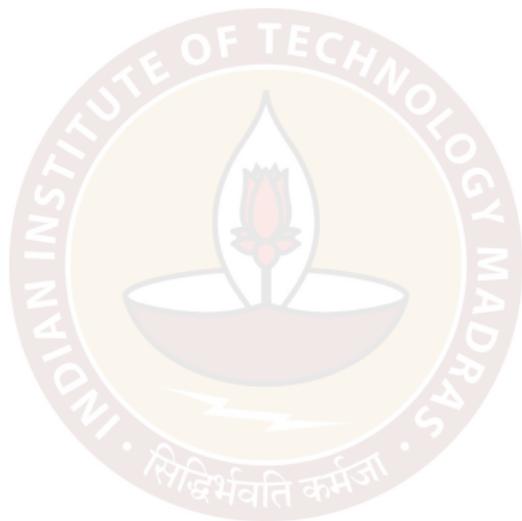
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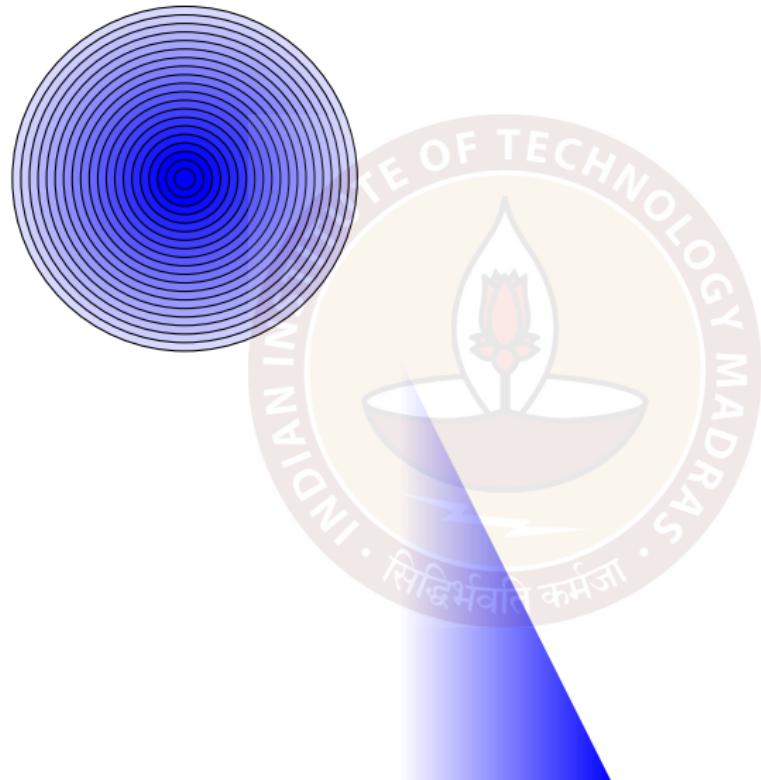
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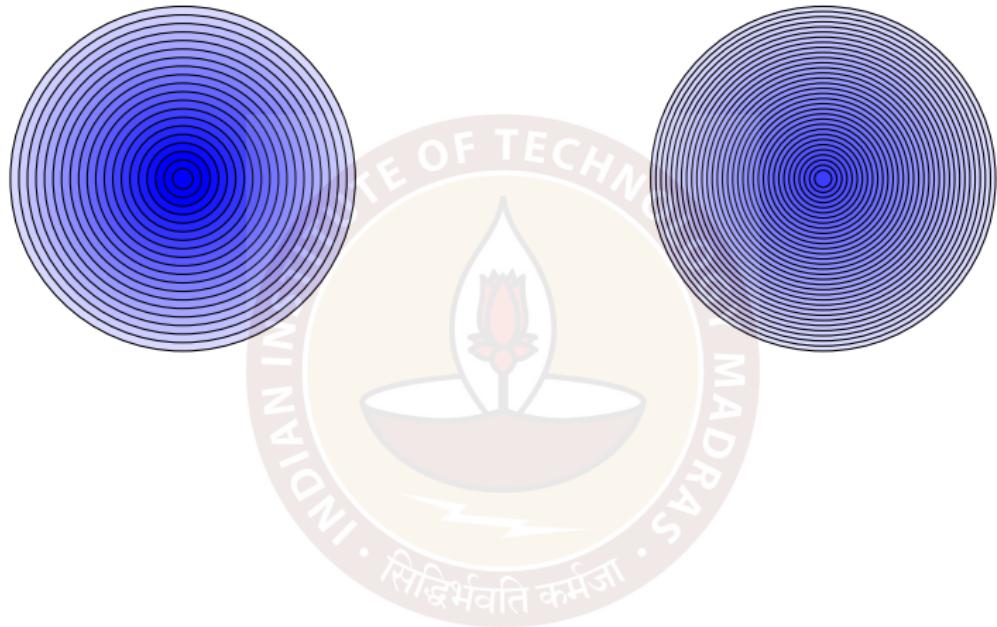
## Non-linear shapes : Contd.



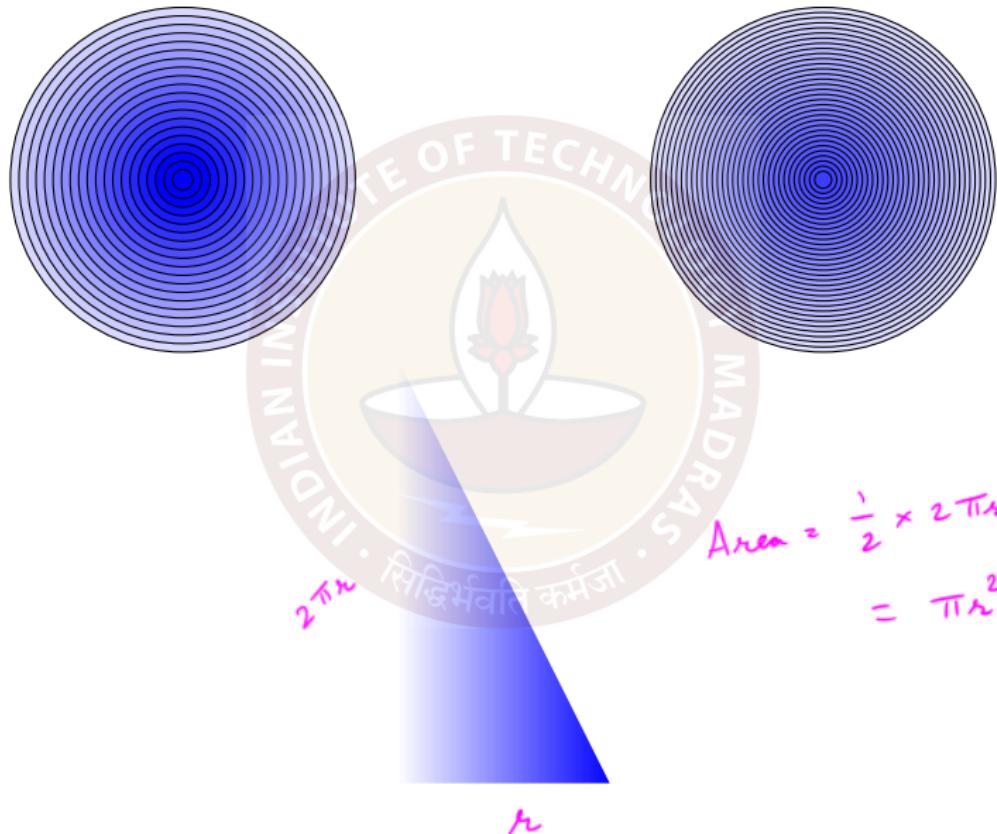
## Non-linear shapes : Contd.



## Non-linear shapes : Contd.



## Non-linear shapes : Contd.



# Thank you

