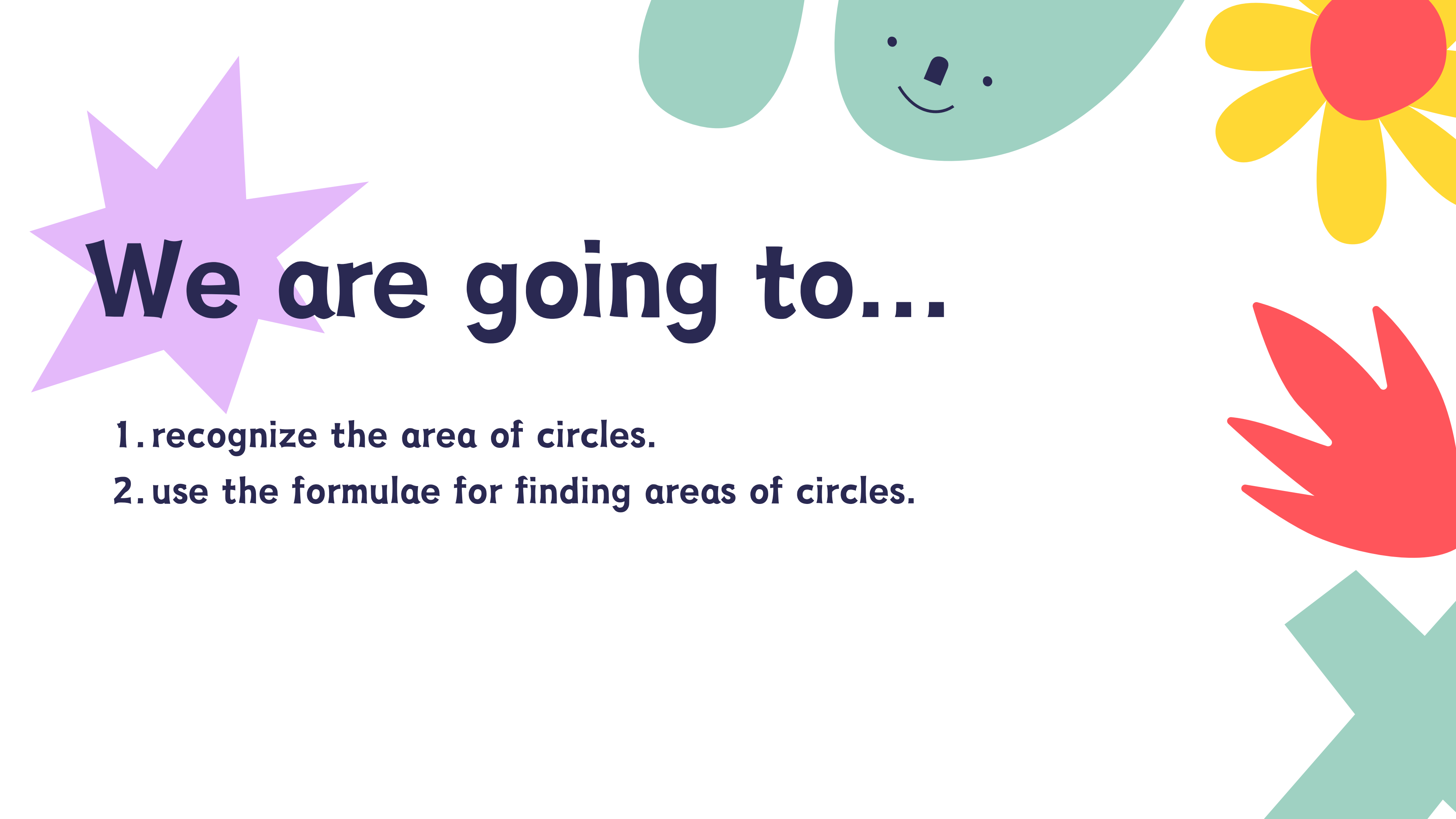


Area of Circles

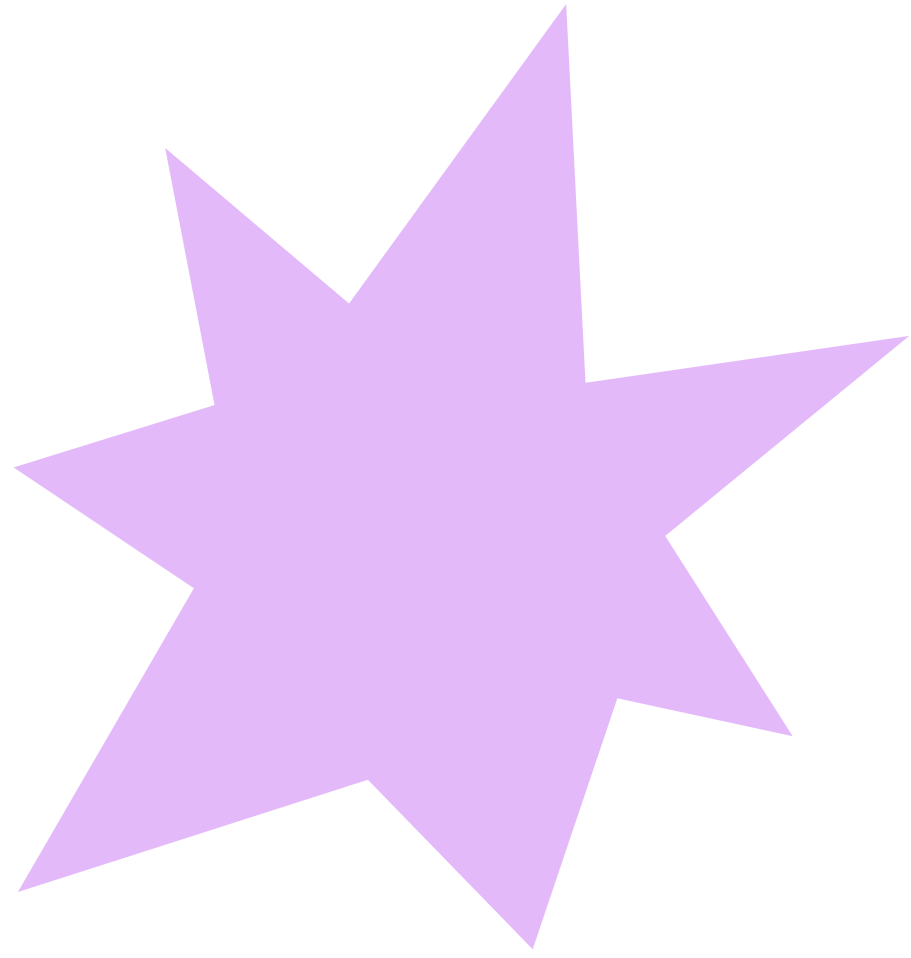




We are going to...

- 1. recognize the area of circles.**
- 2. use the formulae for finding areas of circles.**

Daily life

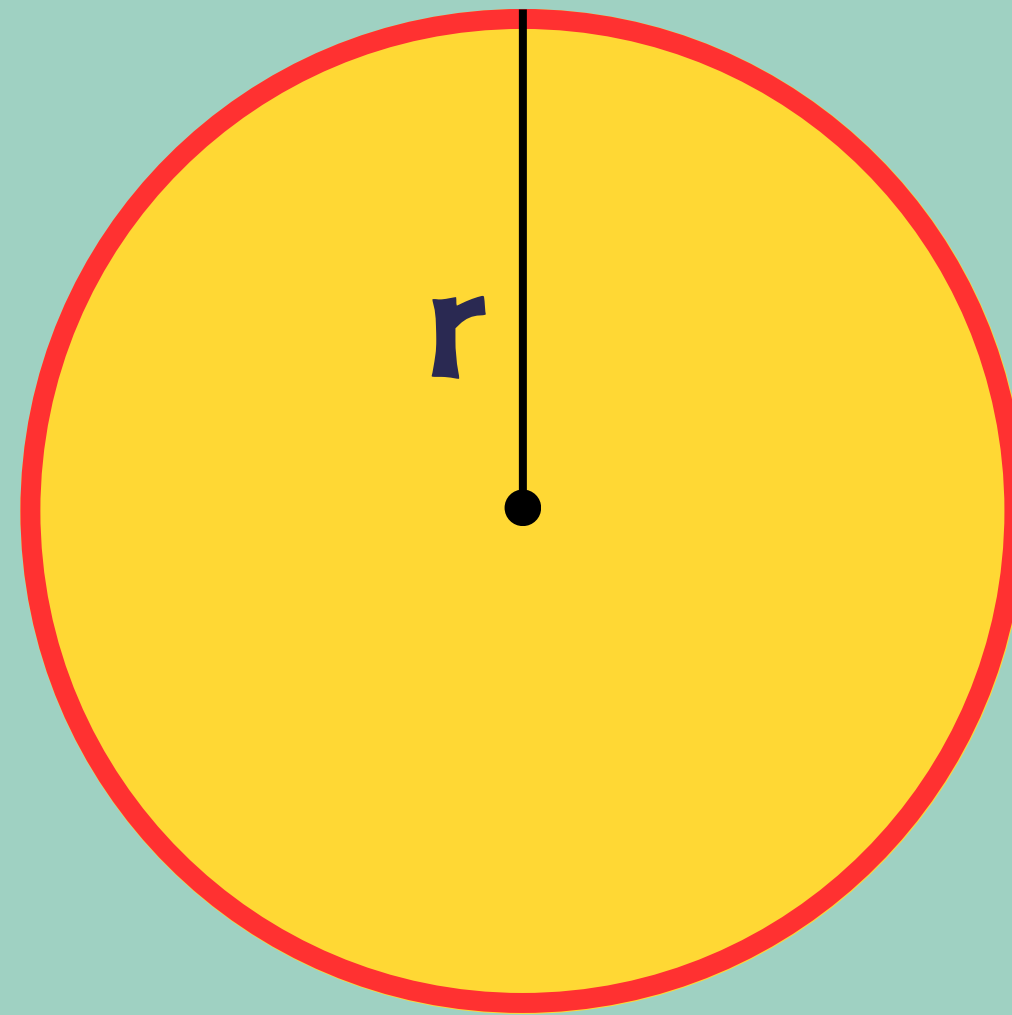


What is **circumference**?



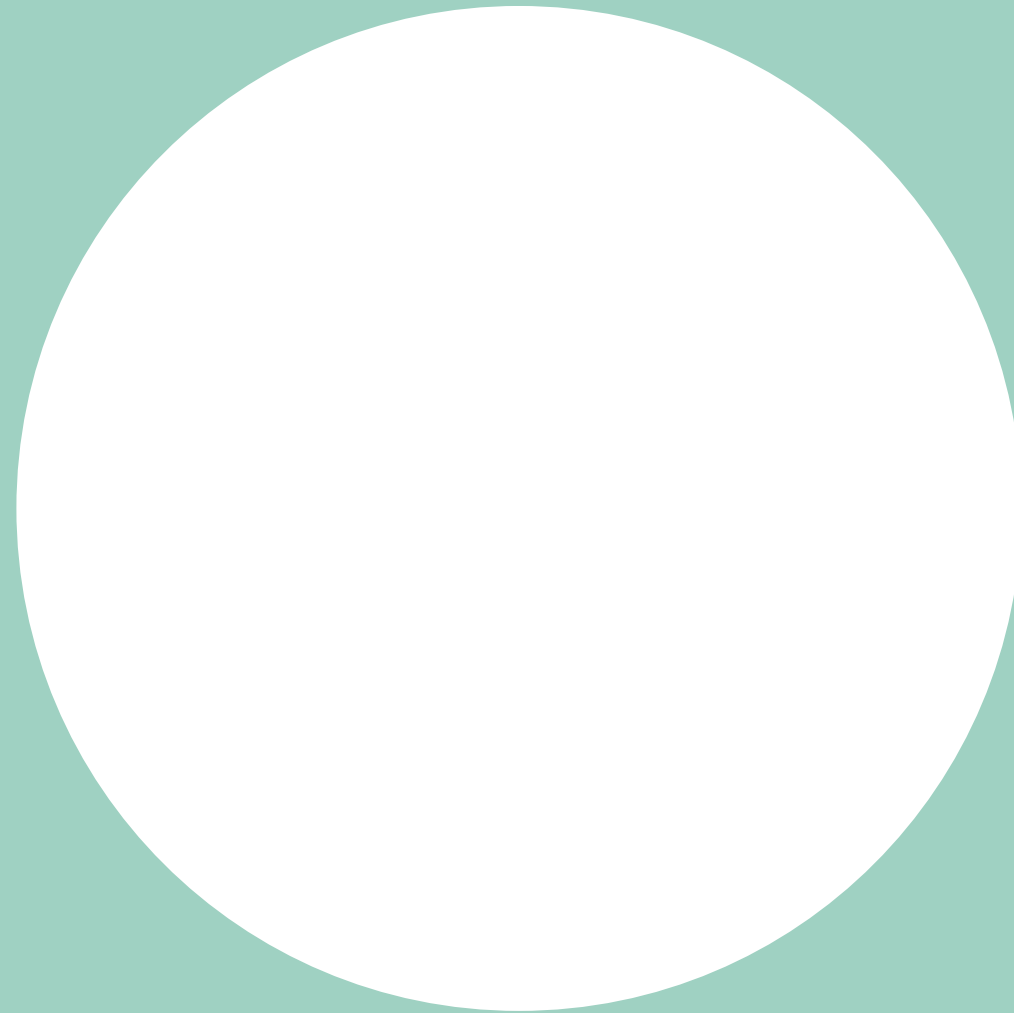
$$2\pi r$$

How to find the **circumference?**

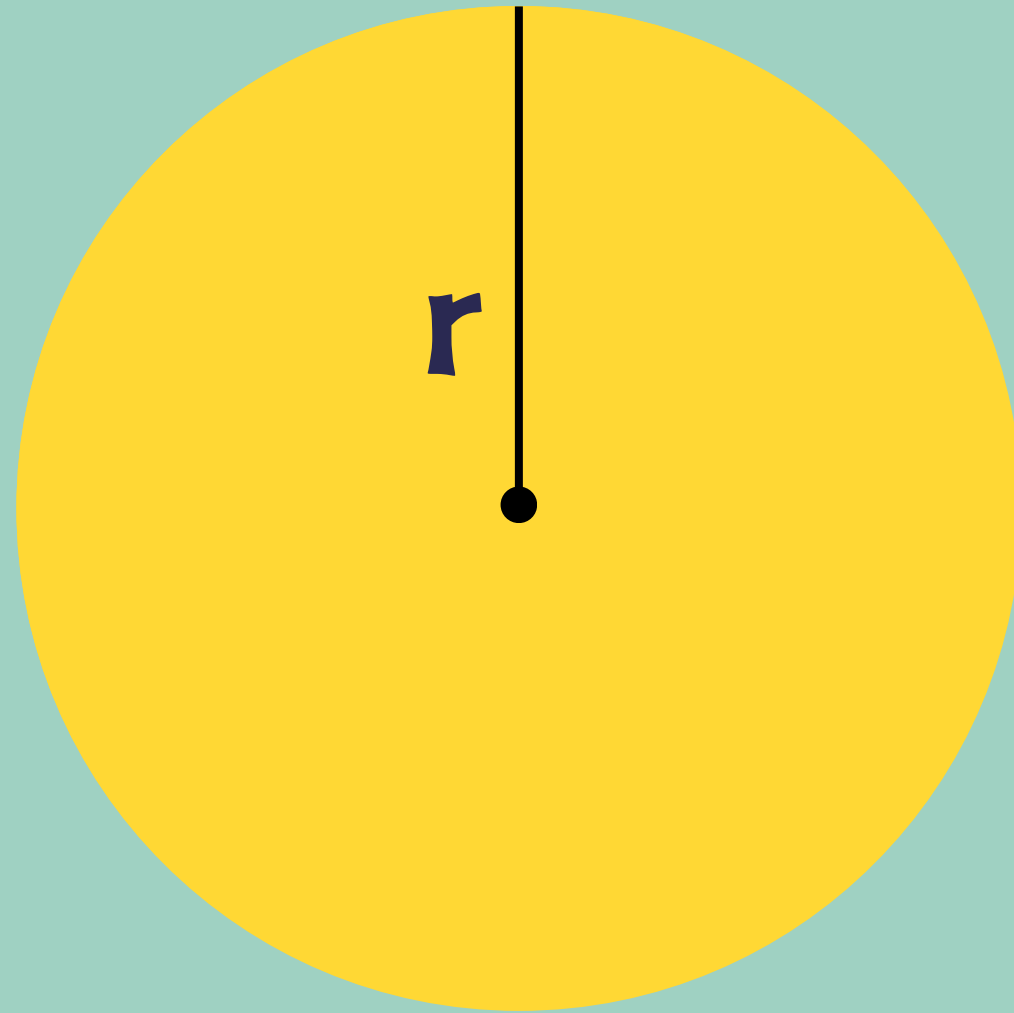


mm / cm / m

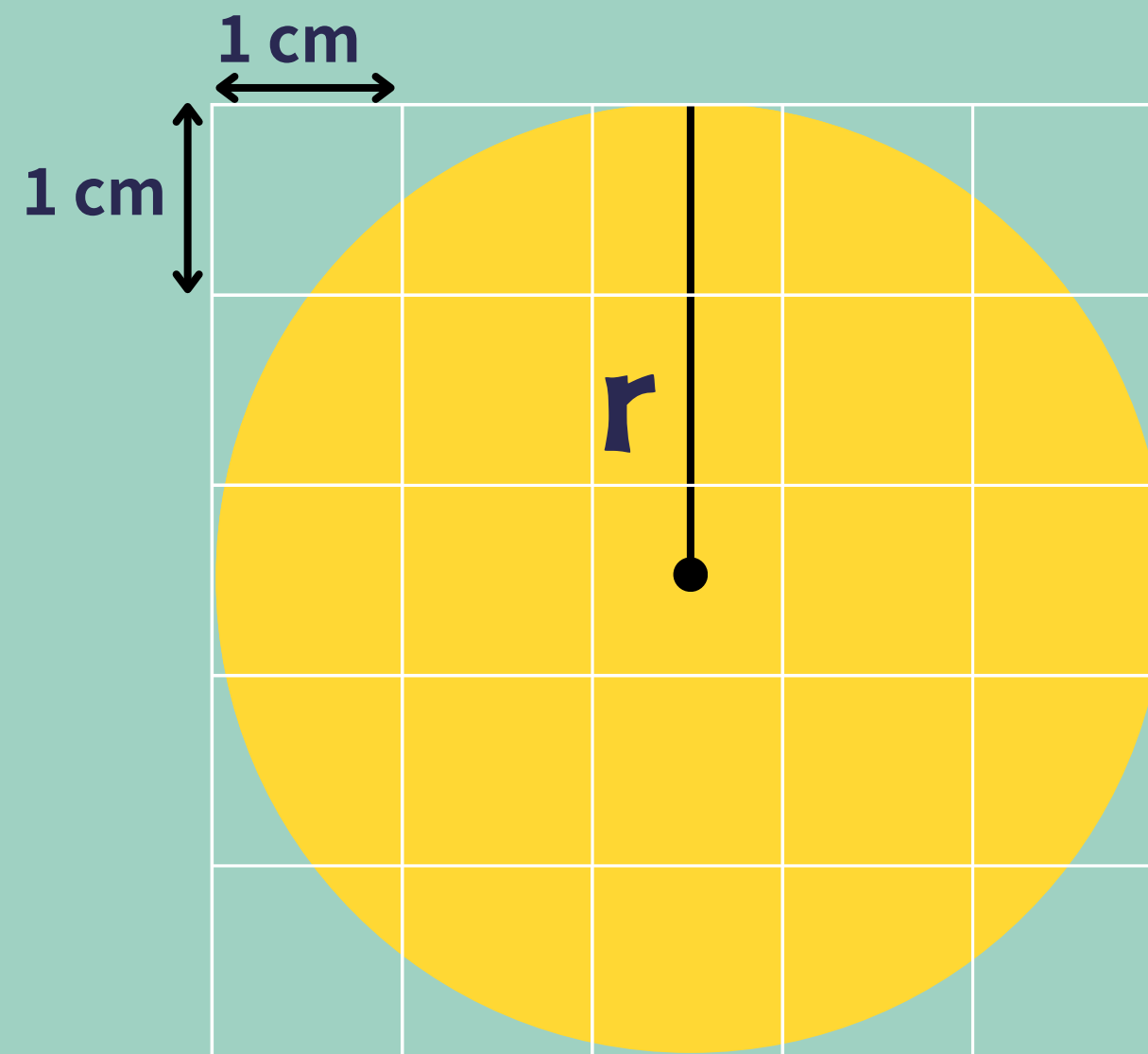
What is area of circle?



How to find the area of circle?

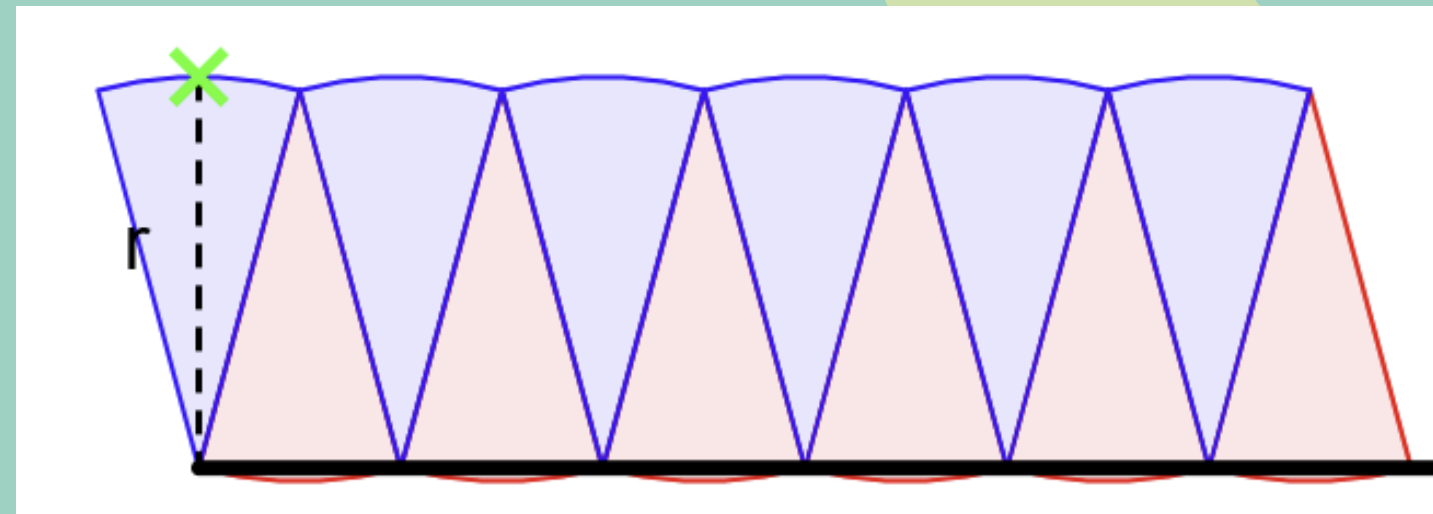
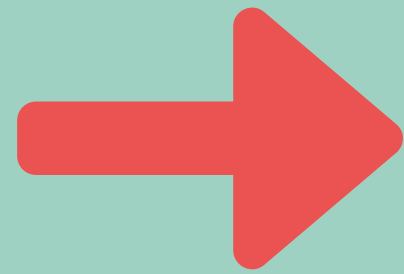
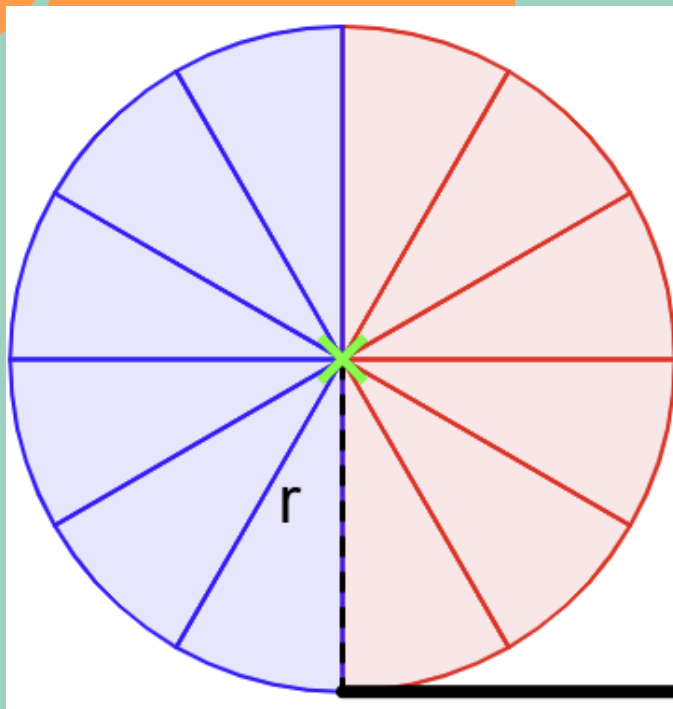


Grid film



Other method!

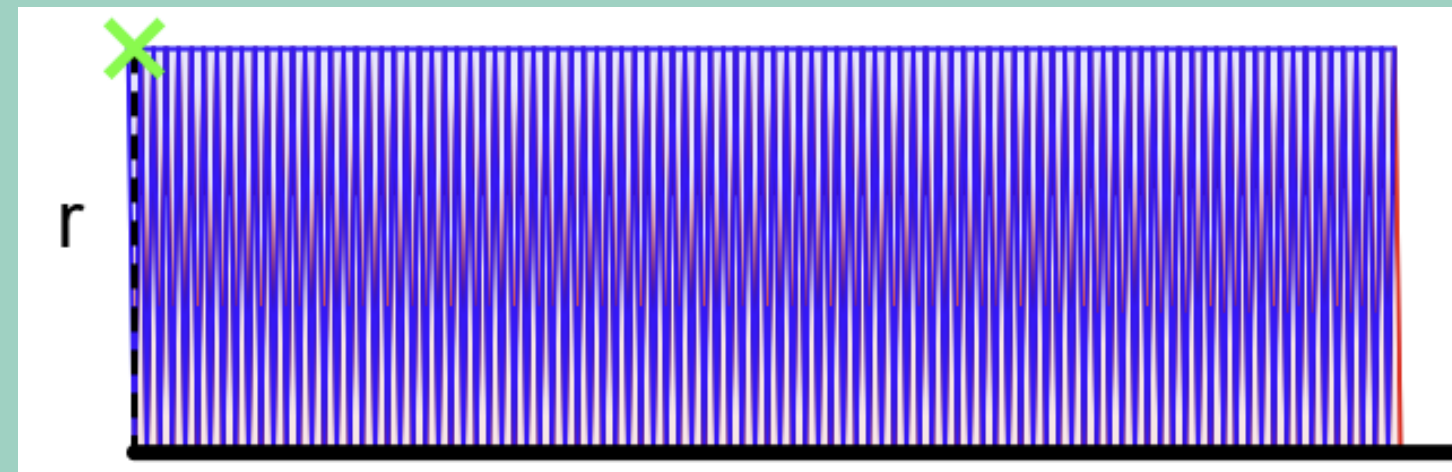
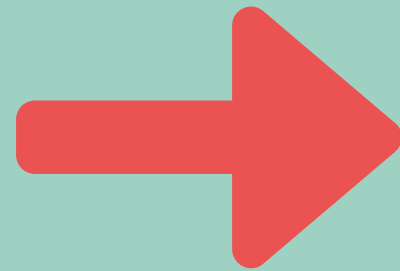
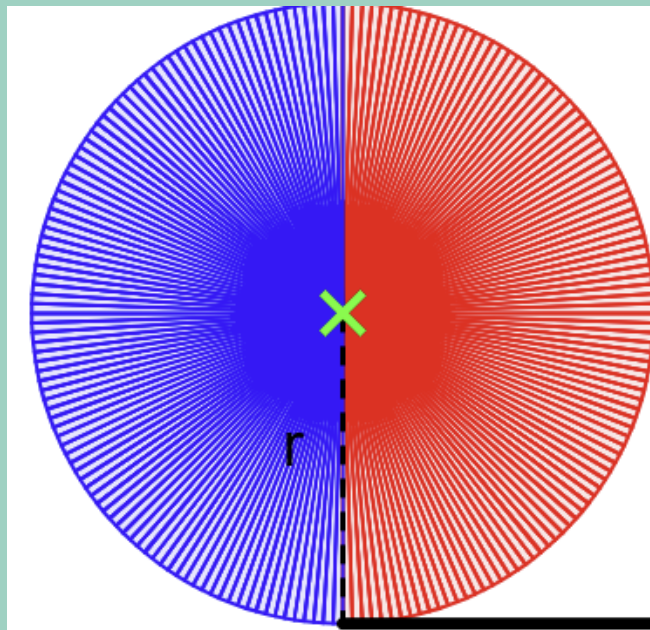




πr

base x height

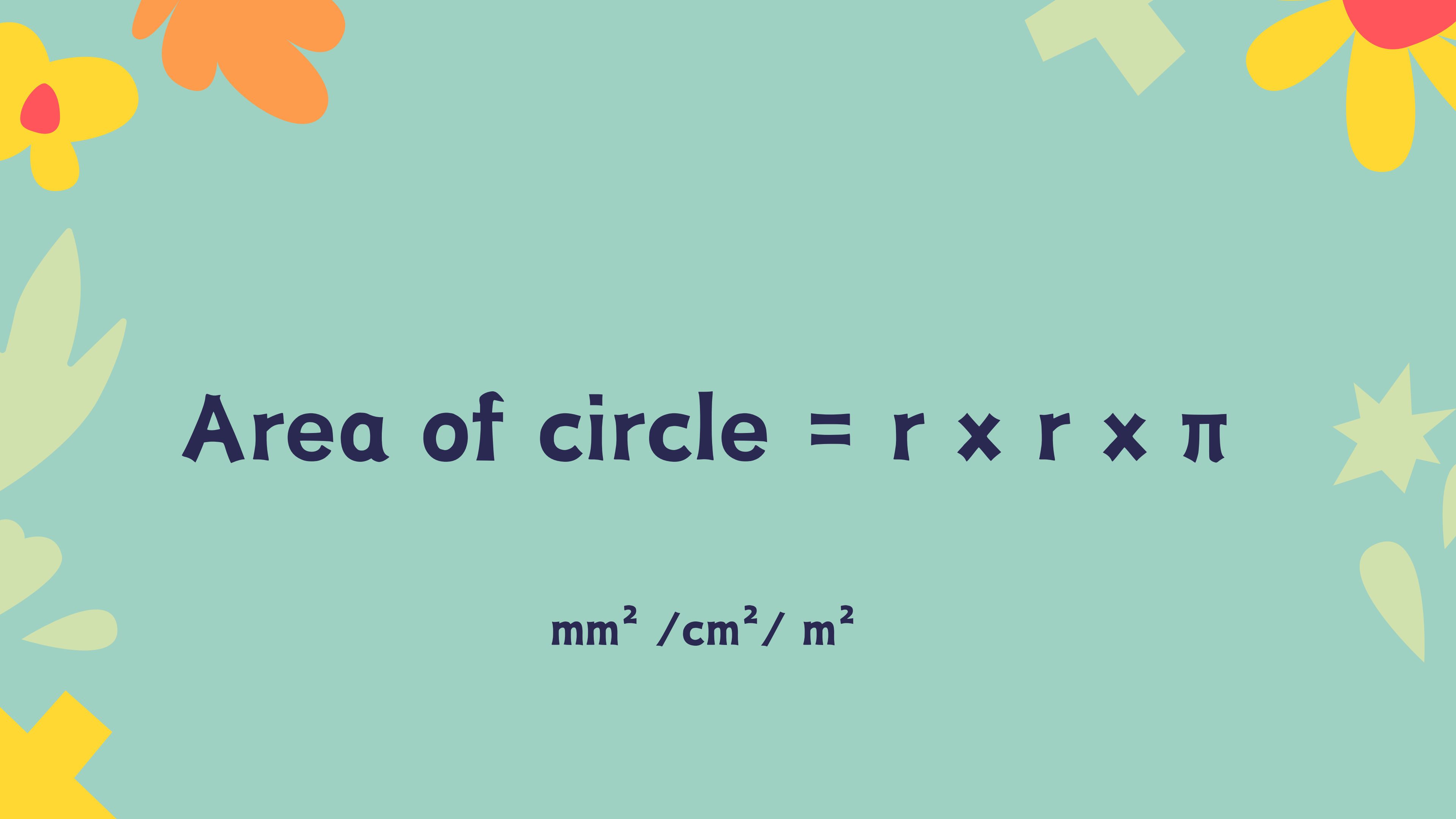
$$r \times \pi r$$



πr

width x length

$$r \times \pi r$$

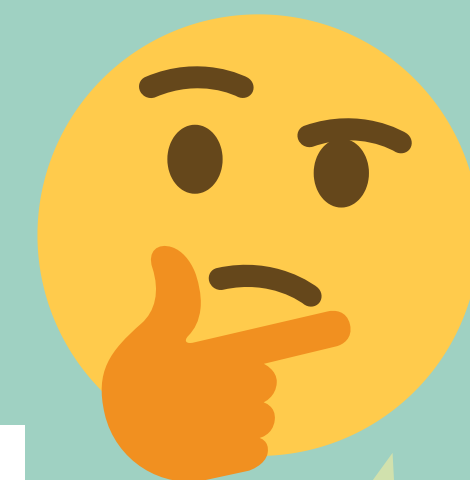
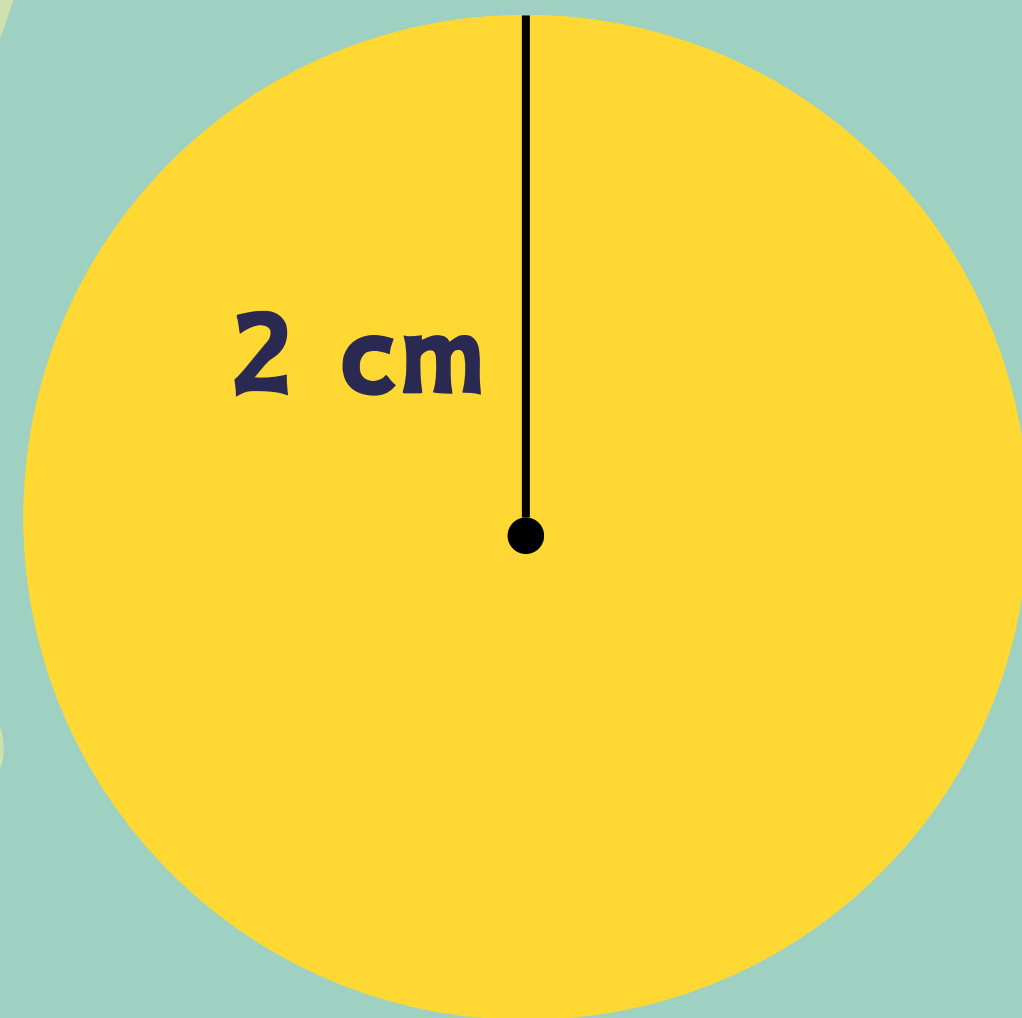


Area of circle = $r \times r \times \pi$

$\text{mm}^2 / \text{cm}^2 / \text{m}^2$

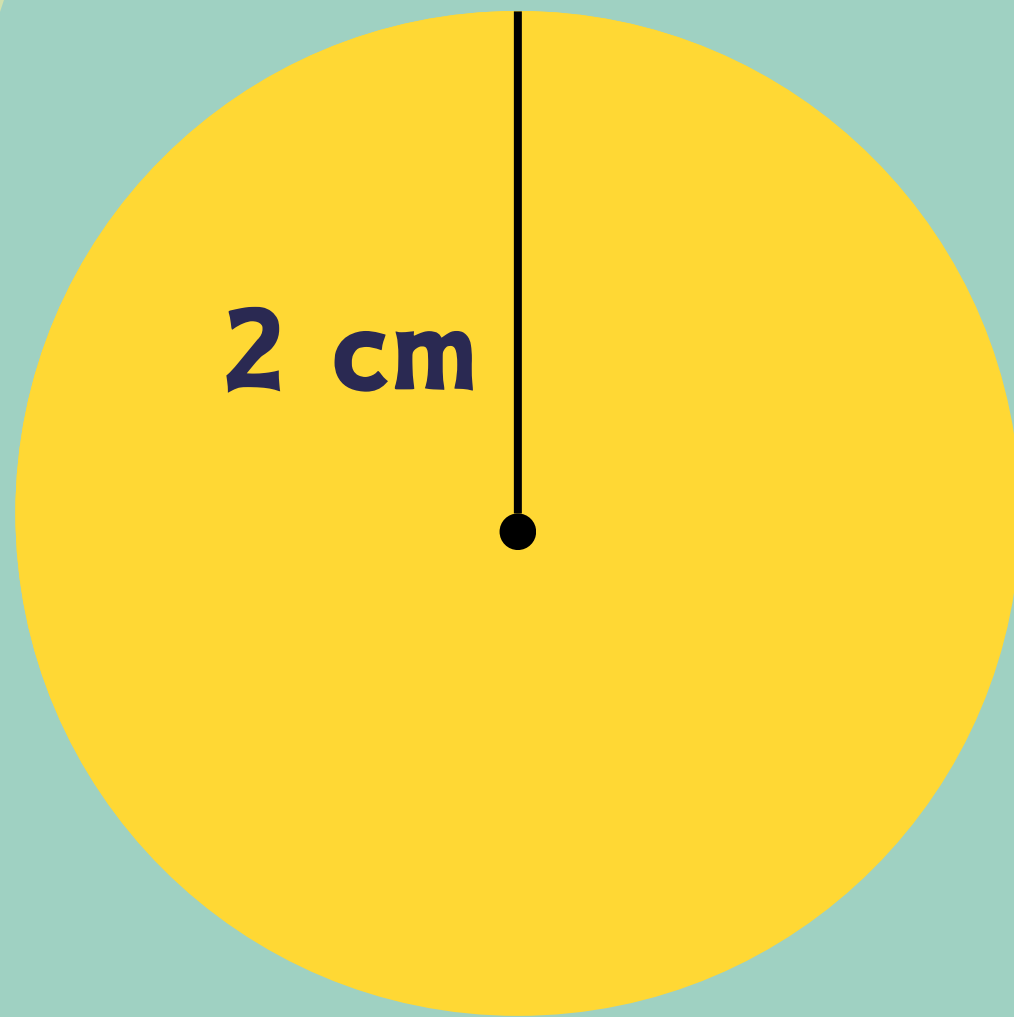
Find the area of the circle.

(Take $\pi = 3.14$)



Find the area of the circle.

(Take $\pi = 3.14$)



$$r \times r \times \pi$$

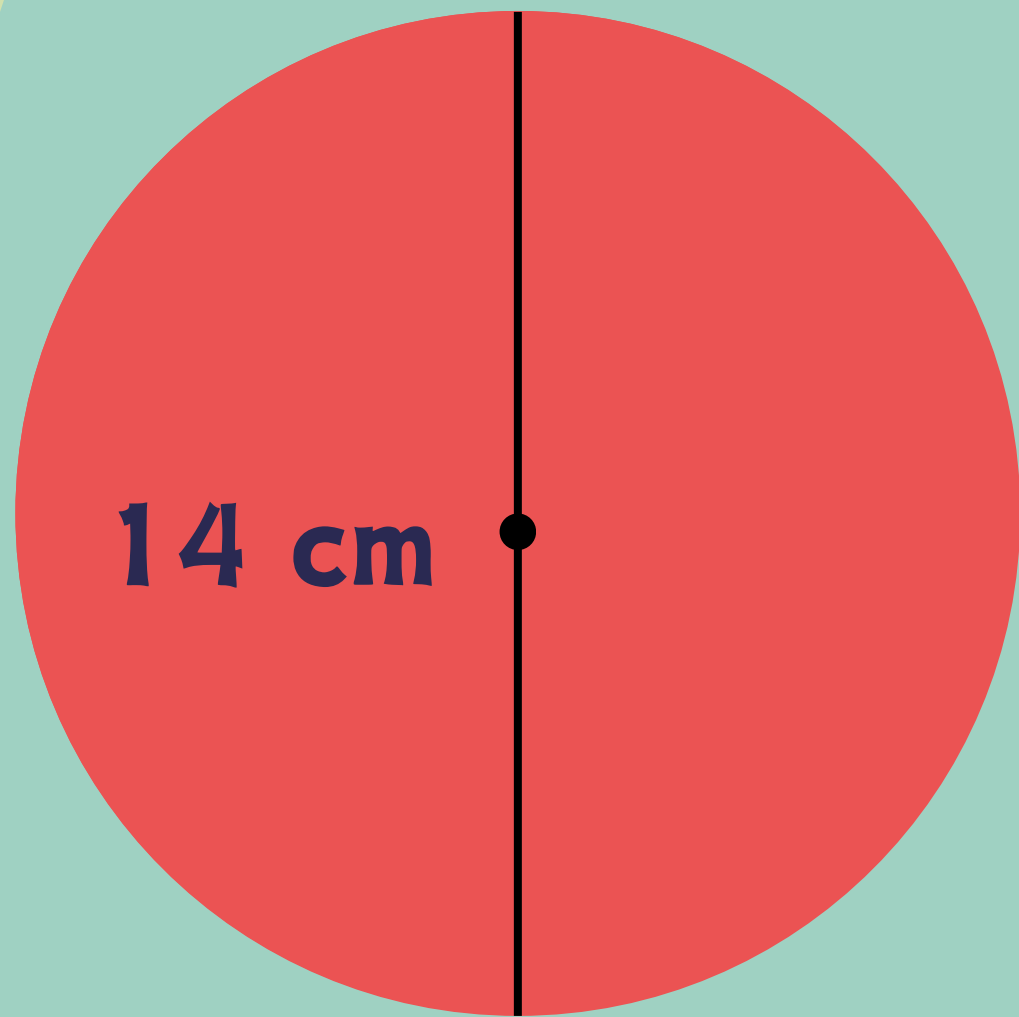
$$2 \times 2 \times 3.14$$
$$= 12.56$$

The area of the circle is 12.56 cm^2 .



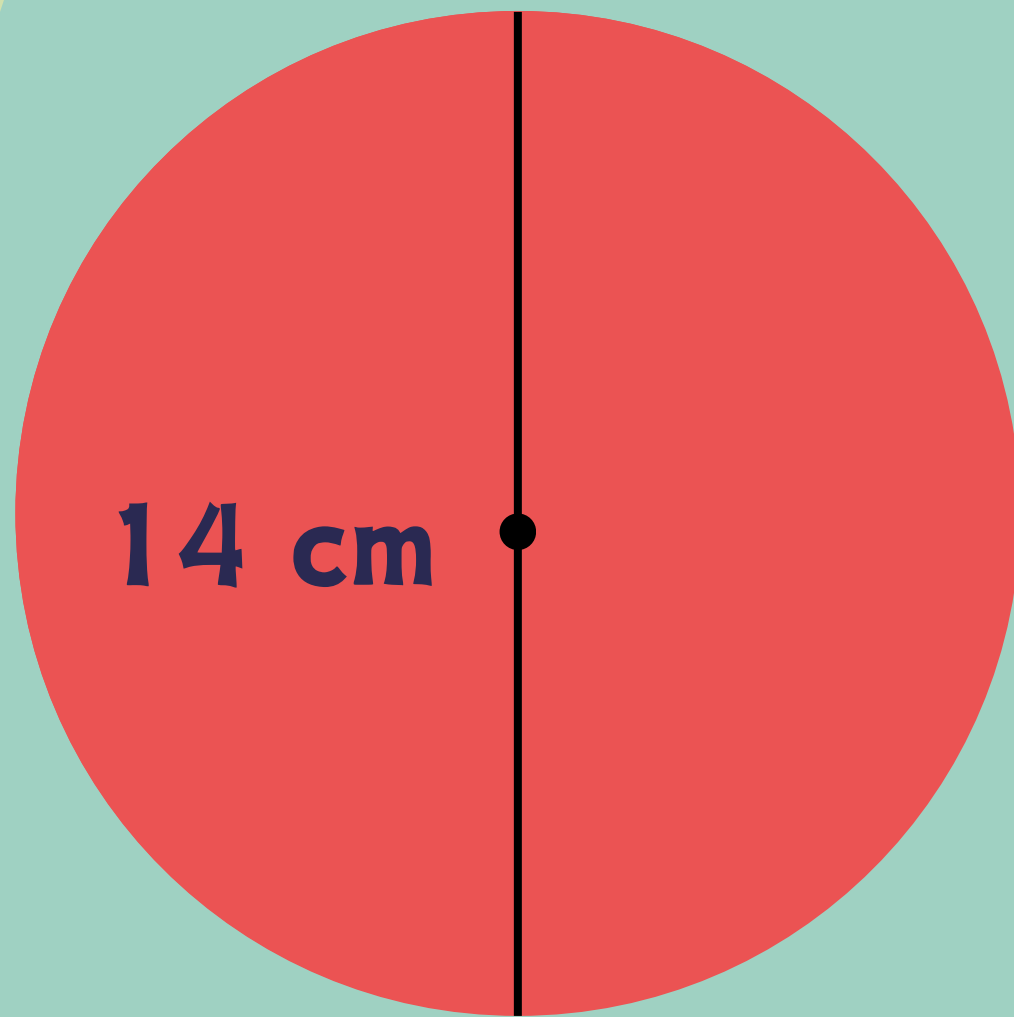
Find the area of the circle.

(Take $\pi = \frac{22}{7}$)



Find the area of the circle.

(Take $\pi = \frac{22}{7}$)



$$r \times r \times \pi$$

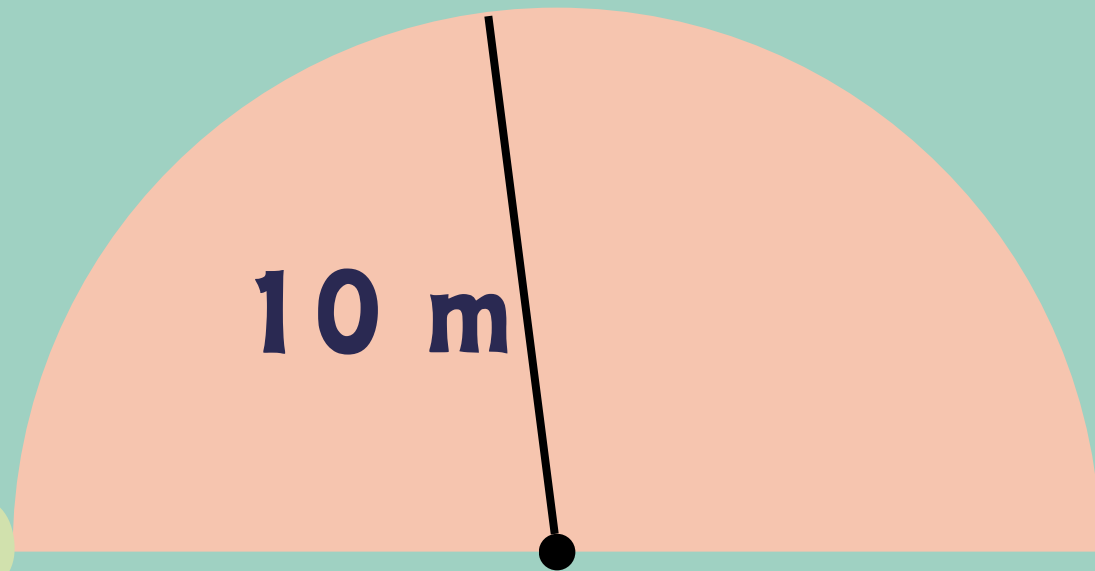
$$(14 \div 2) \times (14 \div 2) \times \frac{22}{7}$$
$$= 154$$

The area of the circle is 154 cm².



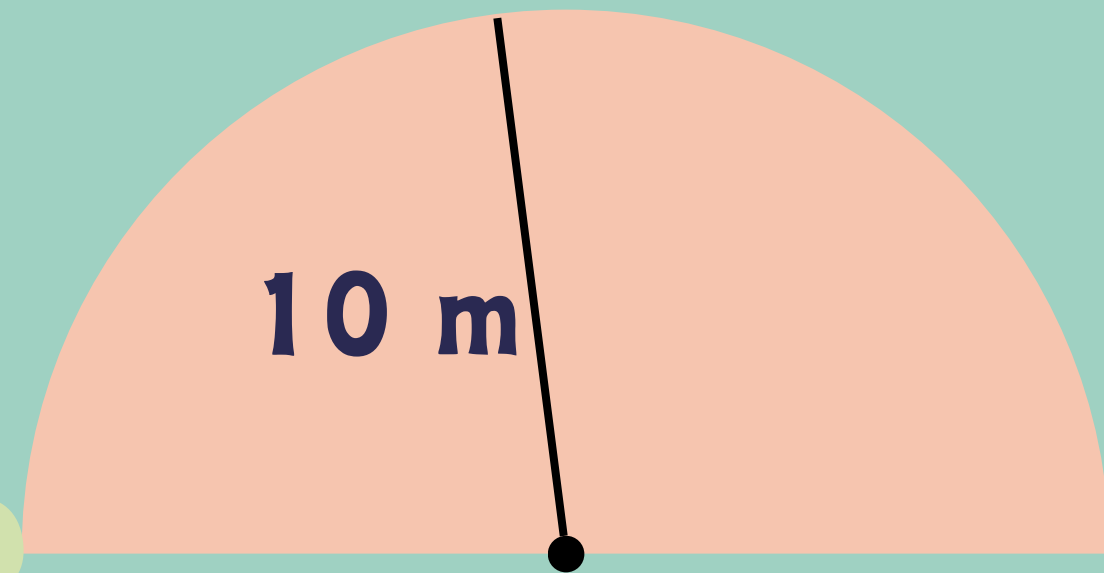
Find the area of the semi-circle.

(Take $\pi = 3.14$)



Find the area of the semi-circle.

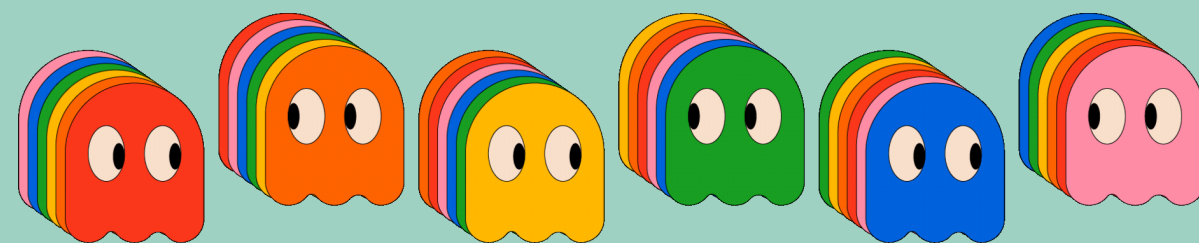
(Take $\pi = 3.14$)



$$10 \times 10 \times 3.14 \div 2 \\ = 157$$

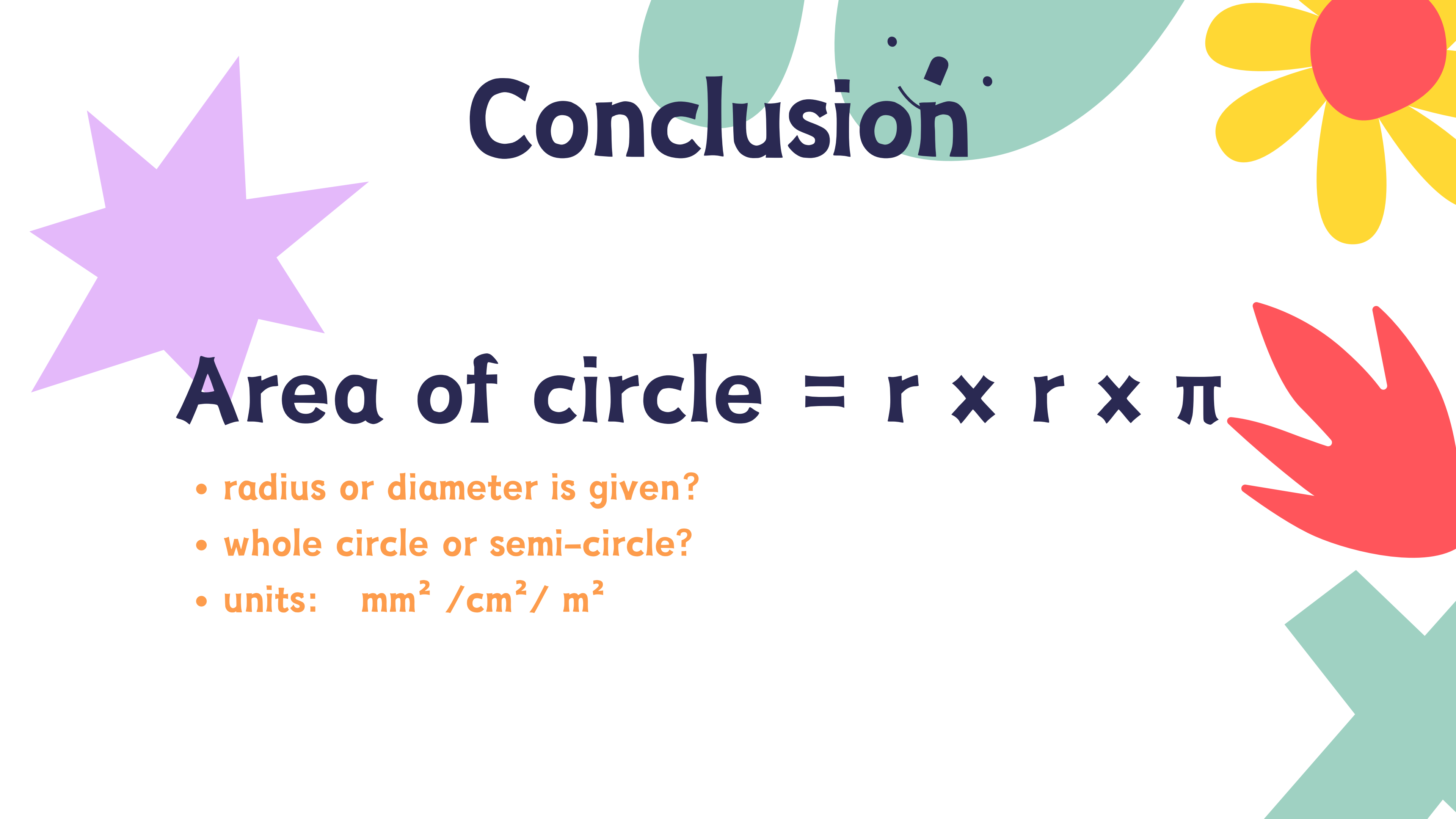
The area of the circle is 157 m^2 .





Koobits time!





Conclusion

Area of circle = $r \times r \times \pi$

- radius or diameter is given?
- whole circle or semi-circle?
- units: mm^2 / cm^2 / m^2