**Lesson 4**

|  |
| --- |
| Topic Goal: Area of a circle  |

The area is the number of square units needed to cover a region

The formula for the area of a circle is

A = ∏ r2

A stands for area

r2 = r x r

∏ = pi ≈ 3.14

In order to find the area of a circle, we need to find the radius of the circle if we are given the diameter.

r = $\frac{d }{2}$

d = diameter

r = radius

|  |
| --- |
| Example(s):  |

1. Find the radius of the circle below

10cm

r = $\frac{d}{2}$

r = $\frac{10cm}{2}$

r = 5cm

 The radius of the circle is 5cm.

1. Find the area of the following circles

A = ∏ r2

A = 3.14 x r x r

A = 3.14 x 17m x 17m

A = 907.46 m2

The area of the circle of 907.46 m2

17mm

First you have to find the diameter

r = $\frac{d}{2}$

r = $\frac{15m}{2}$

r = 7.5m

Then you can find the area

A = ∏ r2

A = 3.14 x r x r

A = 3.14 x 15m x 15m

A = 706.5 m2

The area of the circle of 706.5 m2

15mm

|  |
| --- |
|  Practice Questions:  |

1. Find the diameter of the following circles

26cm

radius:

radius:

9 m

radius:

6m

radius:

17mmm

1. Find the area of the following circles

Area:

16m

Area:

9cm

Area:

70m

Area:

29cm

1. Find the area of the following circles



Area:

d= 18cm

Area:



b)

r = 5mm

 c)

Area:

r = 16cm

Area:

d= 2m

d)

1. Kimesha measured the diameter of her plate to be 10cm.

a)What is the radius of her plate

1. What is the area of her plate?
2. What is the area of half her marble?
3. Erin found the radius of a marble to be 8.4 mm. What is the area of her marble?

|  |
| --- |
|  Assessment:  |

1. Find the diameter of the following circles

28cm

radius:

radius:

39 m

radius:

18m

radius:

79m

1. Find the area of the following circles

Area:

48m

Area:

31mm

Area:

17m

Area:

19cm

1. Find the area of the following circles

Area:

1. 

d= 29mm

Area:

r = 8cm



 b)



Area:

r = 26cm

 c)

d= 2m

 d)

Area:

1. Michael’s DVD has a diameter of 5cm.

 a)What is the radius of his DVD?

1. What is the area of his DVD?
2. What is the area of half the DVD?
3. Stef found the radius hockey puck to be 7.5cm. What is the area of the hockey puck?