Grade Seven Math
Section 4.1: Investigating Circles

## NOTES

Center $\rightarrow$ the middle point in a circle.
$\rightarrow$ Usually labeled as "o"
Radius $\rightarrow$ a line segment joining the center of a circle to a point on the circle.
$\rightarrow$ Labeled as " r "
Diameter $\rightarrow$ a line segment joining two points on a circle and passing through the center. $\rightarrow$ Labeled as "d"

Circle $\rightarrow$ a set of points which are all the same distance from the center.

$$
\text { Diameter }=2 \times \text { Radius } \quad \text { or } \quad \text { Radius }=\text { Diameter } \div 2
$$

## QUESTIONS



1. Find the diameter of a circle with each radius.
$\begin{array}{lll}d=22 \\ \text { A) } 22 \mathrm{~cm} \\ =22 \times 2 & =44 \mathrm{~cm} & \text { B) } 43 \mathrm{~m} \\ d=43 \times 2=86 \mathrm{~m} & \text { C) } 12.5 \mathrm{~mm} \\ d=12.5 \times 2=25 \mathrm{~mm}\end{array}$
$\begin{array}{lll}d=22 \\ \text { A) } 22 \mathrm{~cm} \\ =22 \times 2 & =44 \mathrm{~cm} & \text { B) } 43 \mathrm{~m} \\ d=43 \times 2=86 \mathrm{~m} & \text { C) } 12.5 \mathrm{~mm} \\ d=12.5 \times 2=25 \mathrm{~mm}\end{array}$
$\begin{array}{lll}d=22 \\ \text { A) } 22 \mathrm{~cm} \\ =22 \times 2 & =44 \mathrm{~cm} & \text { B) } 43 \mathrm{~m} \\ d=43 \times 2=86 \mathrm{~m} & \text { C) } 12.5 \mathrm{~mm} \\ d=12.5 \times 2=25 \mathrm{~mm}\end{array}$
2. Find the radius of a circle with each diameter.
A) 40 m
B) 13 mm
C) 14.2 cm
$r=40 \div 2=20 m$
$r=13 \div 2=6.5 \mathrm{~mm}$
$r=4.2 \div 2=7.1 \mathrm{~cm}$
3. State the length of the radius and the diameter of each circle.


Radius= $\qquad$
Diameter= $\qquad$


Radius= $\qquad$
Diameter= $\qquad$


Radius= $\qquad$
Diameter= $\qquad$
4. A circular tabletop is to be cut from a rectangular piece of board measuring 1.2 m by 1.8 m . What is the radius of the largest tabletop that could be cut? Draw a sketch.

$$
\begin{aligned}
& d=1.2 \mathrm{~m} \\
& r=1.2 \mathrm{~m} \div 2=0.6 \mathrm{~m}
\end{aligned}
$$


5. The bottom of a drinking glass has a radius of 3.56 KN . A rectangular tray has dimensions 40 cm by 25 cm . How many glasses will fit onto the tray? 5

6. Using a compass, draw each circle.
A) radius 6 cm

B) diameter 8 cm

C) Diameter 9 cm


