Warm-Up

Review for Assessments

1) Write an algebraic expression for Karen who has 4 more than twice the amount of sweaters than Sam.

$2s + 4$

No calculators

2. a) $5 \times 8 \times 7 \times 20$

56×100

5600

b) $(-18) + (-24)$

Same sign so add # part keep sign

$= (-42)$

Unit 4

Circles & Area

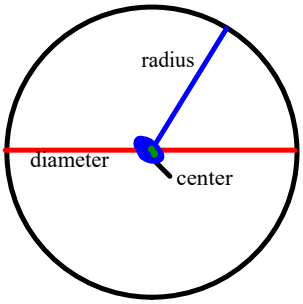
Circles

A circle is a shape where all points are the same distance(or equidistant) from the center.
From the math dictionary - A circle is a round flat two-dimensional shape where all points on the circumference are the same distance from the center.

The longest line through a circle, must pass through the center of the circle, this is the diameter of the circle.

The distance from the center of the circle to the outside of the circle is called the radius.

The circumference is the distance around (or perimeter) of the circle.



There is an infinite (unlimited number) of diameters and radii (plural for radius) that can be drawn.

What is the relationship between the radius and the diameter?

The diameter is 2 times the radius - $d = 2r$

or

The radius is half the diameter - $r = \frac{d}{2}$ ← means divide

Let us try one together

1a) Find the radius if the diameter is 18 cm

$d = 18\text{cm}$

$r = ?$

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

$r = \frac{18\text{cm}}{2}$

$r = 9\text{cm}$

b) Find the diameter if the radius is 12 cm

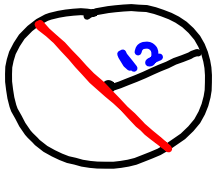
$r = 12\text{cm}$

$d = ?$

$d = 2r$

$d = 2(12\text{cm})$

$d = 24\text{cm}$



You Try

1a) Find the radius if the diameter is 25 cm

$d = 25\text{ cm}$
$r = ?$

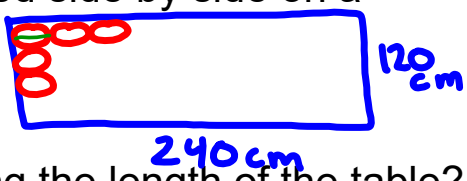
$r = \frac{d}{2}$
$= \frac{25\text{ cm}}{2}$
$= 12.5\text{ cm}$

b) Find the diameter if the radius is 11 cm

$r = 11\text{ cm}$
$d = ?$

$d = 2r$
$= 2(11\text{ cm})$
$= 22\text{ cm}$

Circular plates with diameter 20 cm are placed side by side on a table.
The table measures 240 cm by 120 cm.



a) How many plates can fit side by side along the length of the table?

240cm ÷ 20cm = 12 plates

b) How many plates can fit side by side along the width of the table?

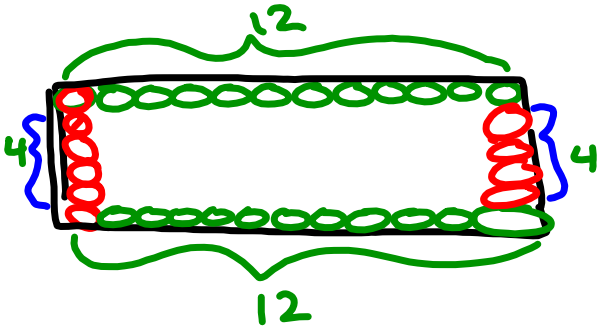
120cm ÷ 20cm = 6 plates

c) How many plates can fit on the table?

6 × 12 = 72 plates

d) How many plates can fit around the perimeter of the table?

12 + 12 + 4 + 4 = 32 plates

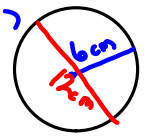


Class/Homework

1) Sketch a circle with the following radius

a) 6 cm b) 8 cm

Label the radius then find the diameter

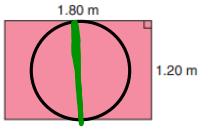


b)

2) Fill in the chart

	Radius	Diameter
a)	1.9 cm (÷2)	3.8 cm
b)	7.5 cm (×2)	15 cm
c)	21 cm (×2)	42 cm
d)	80 cm (×2)	160 cm
e)	11.5 cm (÷2)	23 cm

3) A circular tabletop is to be cut from a rectangular piece of wood that measures 1.20 m by 1.80 m. What is the radius of the largest tabletop that could be cut? Justify your answer. Include a sketch



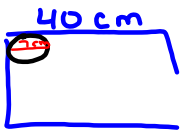
d = 1.20 m

$r = \frac{1.20}{2} = 0.6$ m

4) A glass has a circular base with radius 3.5 cm.

A rectangular tray has dimensions 40 cm by 25 cm.

How many glasses will fit on the tray? (Show work)



r = 3.5

d = ?

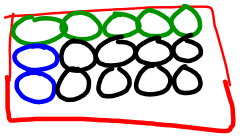
d = 2r

= 2(3.5 cm)

= 7 cm

40 cm ÷ 7 cm = 5 (remainder space)

25 cm ÷ 7 cm = 3 (remainder space)



5 × 3 = 15 glasser

Attachments

Unit 4 Circles Extra practice 1 for unit 4_1.pdf