Warm-Up Grade 7

line up

Assessment Review

1) Find the answer and show work

a) 12.1 + 6.23

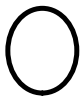
$$\begin{array}{r} 12.10 \\ +\ 6.23 \\ \hline 18.33 \end{array}$$

b) 5.67 x 2

$$\begin{array}{r} 5.67 \\ \times\ 2 \\ \hline 11.34 \end{array}$$

2) Calculate the circumference of each circle.

a) r = 4.2 m



$Cir = 2\pi r$

$Cir = 2(3.14)(4.2m)$

$Cir = 26.376m$

b) d = 24 cm

$Cir = \pi d$

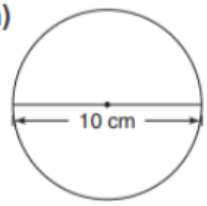
$= (3.14)(24cm)$

$Cir = 75.36\ cm$

1. Calculate the circumference of each circle. Give the answers to two decimal places.

π = 3.14

a)

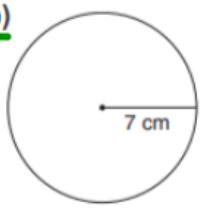


C = π d

= 3.14 x 10 cm

= 31.4 cm

b)

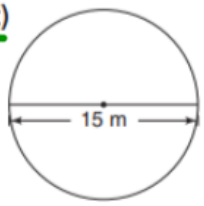


C = 2 π r

= 2 x 3.14 x 7cm

= 43.96 cm

c)



C = π d

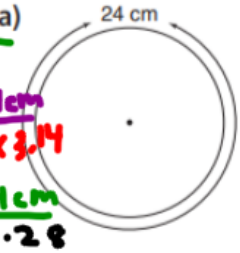
= 3.14 x 15cm

= 47.25 cm

2. Calculate the diameter and radius of each circle. Give the answers to two decimal places.

C =

a)

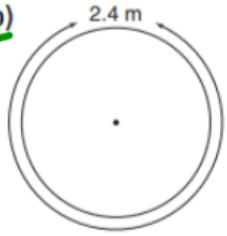


r = 24cm / 2x3.14

= 24cm / 6.28

r = 3.82 cm

b)



r = C / 2π

r = 2.4 m / 2 x 3.14

r = 2.4 m / 6.28

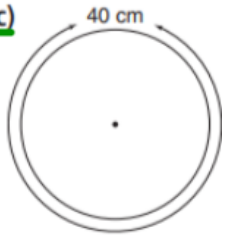
r = 2.4 m / 6.28

r = 0.38 m

or

38 cm

c)



r = C / 2π

r = 40cm / 2 x 3.14

r = 40cm / 6.28

r = 40 cm / 6.28

r = 6.37 cm

4. A circular garden has diameter 2.4 m.

a) The garden is to be enclosed with plastic edging. C=?
How much edging is needed?

b) The edging costs $4.53/m.
What is the cost to edge the garden?

a) C = π d
= 3.14 x 2.4 m
= 75.36 m

75.36m of edging is needed

b) 75.36m x $4.53/m = $341.38

The cost of the edge is $341.38.

5. **a)** Suppose you double the diameter of a circle.
What happens to the circumference?

b) Suppose you triple the diameter of a circle.
What happens to the circumference?

Show your work.

a) C = π d
= 3.14 x 5 m
= 15.7 m

d= 5 so if you double it d =10

C = π d
= 3.14 x 10 m
= 31.4 m

if you double diameter then circumference doubles. Make sense since if you muliply one side by 2 then the other side doubles as well to keep equality/

b) If you triple diameter then the circumference will triple.

6. A carpenter is making a circular tabletop with circumference 4.5 m. ⇒ 450cm
What is the radius of the tabletop in centimetres?

$$r = \frac{C}{2\pi}$$

$$r = \frac{4.5\text{ m}}{2 \times 3.14}$$

$$r = \frac{4.5\text{ m}}{6.28}$$

r = 0.72 m

or

72 cm

The radius is 72 cm.

Calculating Circumference of a Circle

$C = \pi d$ $C = 2\pi r$

When we know the radius or diameter of a circle, we can use one of the formulas above to find the circumference of a circle.

Circumference is a length, so its units are units of length such as m, cm, or mm.

Remember: 1 cm = 10 mm
1 m = 100 cm

Calculate the circumference of a toonie.
Use your calculators BUT show work.

given

$r = 1.4\text{cm}$

$Cir = ?$

$Cir = 2\pi r$

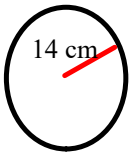
$= 2(3.14)(1.4\text{cm})$

$= 8.79\text{cm}$

Find the circumference of a circle.

Examples:
Find the circumference for each of the following:

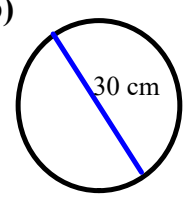
(a)



Given
$r = 14\text{cm}$
$Cir = ?$

$C = 2\pi r$
$= 2(3.14)(14\text{cm})$
$= 87.92\text{cm}$

(b)



given
$d = 30\text{cm}$
$Cir = ?$

$Cir = \pi d$
$= (3.14)(30\text{cm})$
$= 94.2\text{cm}$

Calculating Diameter or Radius of a Circle

$d = \frac{C}{\pi}$

$r = \frac{C}{2\pi}$

→ get r by ÷ by 2

When we know the circumference of a circle, we can use one of the formulas above to find the diameter or radius of a circle.

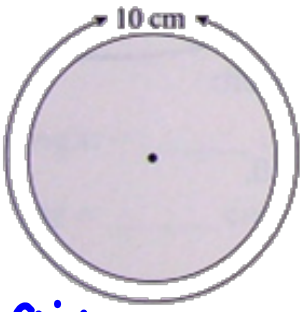
Remember 1 km = 1000 m
1 km = 100 000 cm

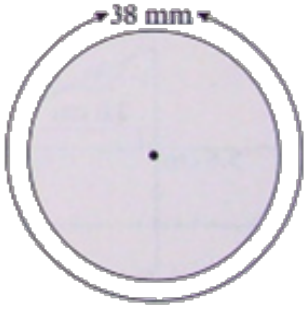
The circumference of each circle is given.
Calculate the diameter and radius. Give the answers to one decimal place.

a) $d =$ 3.18 $r =$ 1.59

b) $d =$ 9.23 cm $r =$ 4.61 cm

c) $d =$ 12.10 mm $r =$ 6.05 mm





1

given
C = 10cm
d = ?

$d = \frac{Cir}{\pi}$

$d = \frac{10\,cm}{3.14}$ ← means ÷

$d = 3.18\,cm$

÷2 to get radius

$r = 1.59\,cm$

given
C = 29cm
d = 2

$d = \frac{Cir}{\pi}$

$= \frac{29cm}{3.14}$

$d = 9.23\,cm$ ÷2

$r = 4.61\,cm$

Class / Homework

Quiz TUESDAY

Finish Yesterday first

Page 136 #1, #2, #4, #5, #6

$d = \frac{C}{\pi}$ $d = \frac{C}{\pi}$

Then

Lesson 4.2: Circumference of a Circle

1. A circle has diameter 10.5 cm.
   Calculate the circumference of the circle to the nearest millimetre.

2. A circle has radius 4.3 mm.
   Calculate the circumference of the circle to the nearest millimetre.

3. A circle has circumference 12.6 m.
   Calculate the diameter of the circle to the nearest centimetre.

4. [redacted] to find the circumference of a circle with radius 5 cm

2. $Cir = 24cm$, $d = ?$

$Cir = \pi \times d$

$24 = 3.14 \times d$

$\frac{24}{3.14} = d$