A Few More Circle Word Problems from Circles 3 Handout

Oct 16-14:19

3). a). Calculate the area of a circle with radius 1.6 cm.
b). What is the radius of a circle with an area of 60 cm^2.

a) $\text{Area} = \pi r^2$
$= 3.14 \times 1.6^2$
$= 8.0384 \text{ cm}^2$

b) $\text{Area} = \pi r^2$
$\frac{60}{\pi} = \frac{\pi r^2}{\pi}$
$19.10828 = r^2$
$\sqrt{19.10828} = r$
$4.37\text{cm} = r$

Opposite of squaring is SQUARE ROOT
$x^2 \rightleftharpoons \sqrt{x}$

Oct 16-14:20

5). Jenny goes for a long cycle ride. Each wheel on her bike has a radius of 18 cm. Her distance counter tells her the wheel has rotated 5000 times. Find how far she has travelled in **Kilometres**.

$C = 2\pi r$

$C = 2 \times 3.14 \times 18$

$= 113.04 \text{ cm}$

$5000 \text{ revs} = 50 \times 113.04$

$= 565200 \text{ cm}$

When converting

cm → m ÷ 100

m → km ÷ 1000

$565200 \text{ cm} \xrightarrow{\div 100} 5652 \text{ m}$

$5652 \text{ m} \xrightarrow{\div 1000} 5.652 \text{ km}$

Oct 16-14:21

13). Billy does a sponsored bike ride. Each wheel on his bike has a radius of 30 cm.
a). Find the circumference of his wheels.
b). His distance counter tells him he has travelled 50 **Kilometres**. How many times have the wheels completely rotated ?

a) $C = 2\pi r$

$= 2 \times 3.14 \times 30$

$= 188.4 \text{ cm}$

b) $50 \text{ km} \xrightarrow{\times 1000} 50{,}000 \text{ m}$

$50{,}000 \text{ m} \xrightarrow{\times 100} 5{,}000{,}000 \text{ cm}$

$\#\text{rotations} = \frac{5{,}000{,}000}{188.4} = 26{,}539.$

Oct 16-14:21