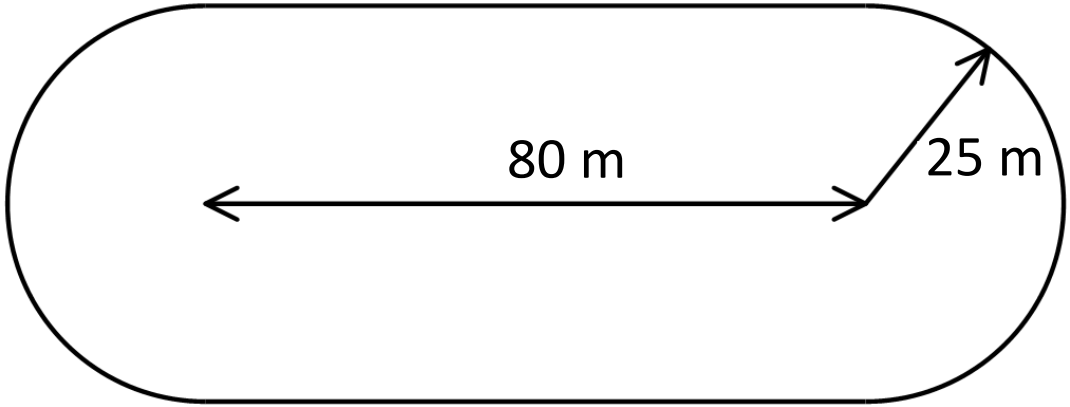
PROBLEM 7

Calculate the circumference of a circle with radius 20 m	Convert 2120 mm to metres	Calculate the circumference of a circle with diameter 40 m

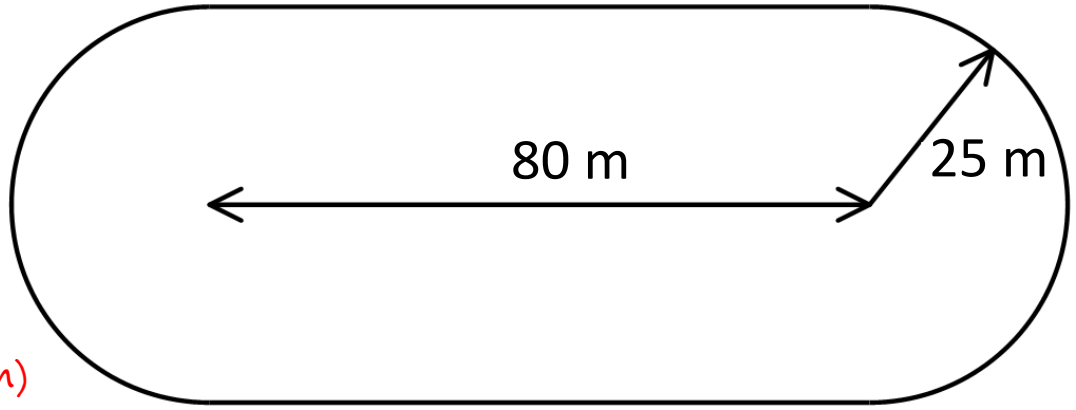
The race track above is made of a rectangle and two semi-circles. A standard bike wheel has a diameter of 620mm. Calculate how many complete revolutions a bike wheel will make when completing 5 laps of the track.



PROBLEM 7

Calculate the circumference of a circle with radius 20 m $C = 2 \times \pi \times 20$ $= 125.66$ m	Convert 2120 mm to metres 2120 mm = 212 cm 212 cm = 2.12 m	Calculate the circumference of a circle with diameter 40 m $C = \pi \times 40$ $= 125.66$ m

The race track above is made of a rectangle and two semi-circles. A standard bike wheel has a diameter of 620mm. Calculate how many complete revolutions a bike wheel will make when completing 5 laps of the track.



Curved track length
$= \pi \times 50$
Total Track length
$= 50\pi + 160$
(317.08 m)

Circumference of the wheel
$= \pi \times 0.62$
$= 0.62\pi$ (1.948m)

Number of revolutions $= \frac{50\pi+160}{0.62\pi} = 162$ (complete revolutions)