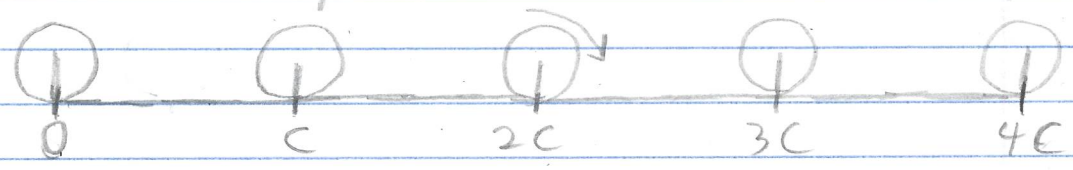


Exercise A.2.47 How many feet has a wheel with a diameter of 16 inches traveled after four revolutions?

Solution

The circumference of a wheel of diameter d is $C = \pi d$. Since $d = 16$ inches here, then the circumference of the wheel is $C = 16\pi$ inches.

If a wheel goes through four revolutions, then it travels four times the circumference $4C$.



So the distance traveled is

$$4C = 4(16\pi) \text{ inches} = \boxed{64\pi \text{ inches}} \quad \square$$