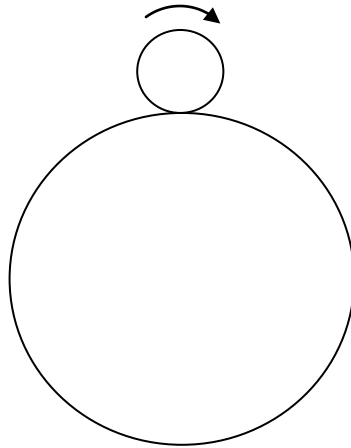


## Wheel Question



Q: Small circle whose radius is  $r$  rotates around the large circle whose radius is  $4r$  without slip. When small circle returns to the starting position, how many rotations does it take?

### “The Famous ‘Wheel Question’”

This question was proposed in the *Scientific American*, in 1868: ‘How many revolutions upon its own axis, will a wheel make in rolling once around a fixed wheel of the same size?’

The question brought to the editor of that paper many replies all claiming to have solved it. Yet the replies were about equally divided as to the number of revolutions, one part claiming one revolution and the other two revolutions. So much interest was manifested in it that Munn & Co. published *The Wheel*, June, 1868. It contains 72 pages, giving many of the solutions, illustrated by many diagrams.

– *Miscellaneous Notes and Queries*, August 1889

<http://www.futilitycloset.com/2007/10/02/the-famous-wheel-question/>