

Math Grades 7 – 12
Direct and Inverse Variation

MA.7.A.1.5

A Short Account of the History of Mathematics

"Christian Huygens"

W. W. Rouse Ball

Reading Level: 12

Activity:

1. The following is a quote from the reading, "*In the fifth and last chapter he discusses again the theory of clocks, points out that if the bob of the pendulum were, by means of cycloidal clocks, made to oscillate in a cycloid the oscillations would be isochronous; and finishes by showing that the centrifugal force on a body which moves around a circle of radius r with a uniform velocity v varies directly as v^2 and inversely as r .*"

Write an equation that shows that the velocity v varies directly as v^2 and inversely as r .

Write an equation for each of the following statements. Use k for the constant of variation.

2. distance varies directly as time
3. length varies inversely as width
4. salary varies directly as hours worked
5. time varies inversely as speed
6. studying varies directly as grade