

Lesson: A Review of Variation

Describe the 3 types of variation and outline any patterns that might help you remember.

Direct Variation

Inverse Variation

Joint Variation

Combined Variation

Example If y varies directly with x , and $y=15$ when $x=3$, find y when $x=6$

Example If a varies jointly with b and c , and $a=40$ when $b=2$ and $c=5$, find a when $b=3$ and $c=2$.

Example If p varies inversely with m and directly with the square of t , and $p=32$ when $t=2$ and $m=4$, find p when $t=3$ and $m=9$

Example Rewrite the following situations as variation.

a. $C = 2\pi r$, when C is the circumference of a circle and r is the radius.

b. $r = \frac{d}{t}$, where r is the speed when traveling d miles over t hours.

c. $f = \frac{mv^2}{r}$, where f is the centripetal force of an object of mass m moving along a circle with radius r at velocity v.