

The image shows the front cover of a book. The cover has a dark blue, textured background. A thin, light-colored rectangular border is visible around the perimeter of the cover. In the upper portion of the cover, there is a solid red rectangular area. Centered within this red area is the title of the book, written in white capital letters. The word 'MATHEMATICS' is in a smaller, italicized serif font. Below it, 'DICTIONARY' is in a larger, bold serif font. Underneath 'DICTIONARY' is the word 'and' in a smaller, lowercase serif font. Finally, 'HANDBOOK' is in the same large, bold serif font as 'DICTIONARY'.

MATHEMATICS
DICTIONARY
and
HANDBOOK

MATHEMATICS DICTIONARY and HANDBOOK

Eugene D. Nichols, Ph.D.

Sharon L. Schwartz, M.S.



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About the Authors

Eugene D. Nichols

Distinguished Professor Emeritus
of Mathematics Education
Florida State University

*Author of elementary, high school,
and college mathematics textbooks*

Sharon L. Schwartz

Mathematics Teacher

*Author and editor of elementary and
secondary mathematics textbooks*

Art and Design

Joan Gazdik Gillner

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Range of a distribution

Also called **Range of a set of data**. The difference between the largest and smallest number in a set of data. The range can be given as an interval.

EXAMPLE 3, 8, 11, 15, 20

Range: $20 - 3 = 17$, or from 3 to 20.

CHECK YOUR UNDERSTANDING

What is the range of the ages of 5 children whose ages in years are the following: 2, 4, 7, 10, 14?

$14 - 2 = 12$, or from 2 to 14

R

Range of a function

The set of all second members (elements) of a function. Given the function $\{(1,5), (2,10), (3,15), (4,20), (5,25)\}$, the range is $\{5, 10, 15, 20, 25\}$. The **domain** of the function is the set of all first members, $\{1, 2, 3, 4, 5\}$.

CHECK YOUR UNDERSTANDING

What is the range of the following function?

$\{(1,3), (2,6), (3,9), (4,12)\}$

$\{3,6,9,12\}$

Rate

A comparison by a ratio of two different kinds of units.

EXAMPLES OF RATES

1. A car travels at the rate of 45 miles per hour (mph). Speed is one kind of unit; hour is another kind of unit.
2. A machine produces 100 bolts per minute. Bolt is one kind of unit; minute is another kind of unit.

CHECK YOUR UNDERSTANDING

Sound travels about 1.5 kilometers per second (km/s). Is it correct to say that the *rate* of travel of sound is about 1.5 kilometers per second?

yes, kilometer is one kind of unit, second is another kind of unit.