

Design Recipe

A rocket is traveling from Earth to Mars at 80 miles per second. Write a function that describes the time the rocket has been traveling, as a function of distance.

I. Contract+Purpose Statement

Every contract has three parts:

$$; \frac{\text{time}}{\text{name}} : \frac{\text{Number}}{\text{Domain}} \rightarrow \frac{\text{Number}}{\text{Range}}$$

• Given the distance, produce the time-traveled if it moves at 80mi/sec

What does the function do?

II. Give ExamplesGive Examples

Write an example of your function for some sample inputs

time(0) = 0/80

Use the function here	What should the function produce?
<code>getMonth()</code>	Month of the year
<code>getDay()</code>	Day of the week
<code>getFullYear()</code>	Year
<code>getMonthIndex()</code>	Month of the year (0-11)
<code>getDayIndex()</code>	Day of the week (0-6)
<code>getYearIndex()</code>	Year (0-9999)

time(10) = 10/80

Use the function here	What should the function produce?
<code>getMonth()</code>	Month of the year
<code>getDay()</code>	Day of the week
<code>getFullYear()</code>	Year
<code>getMonthIndex()</code>	Month of the year (0-11)
<code>getDayIndex()</code>	Day of the week (0-6)
<code>getYearIndex()</code>	Year (e.g. 2010)

time(80) = 80/80

Use the function here	What should the function produce?
<code>getMonth()</code>	Month of the year
<code>getDay()</code>	Day of the week
<code>getFullYear()</code>	Year
<code>getMonthIndex()</code>	Month of the year (0-11)
<code>getDayIndex()</code>	Day of the week (0-6)
<code>getYearIndex()</code>	Year (e.g. 2020)

time(190) = 190/80

Use the function here	What should the function produce?
<code>getMonth()</code>	Month of the year
<code>getDay()</code>	Day of the week
<code>getFullYear()</code>	Year
<code>getMonthIndex()</code>	Month of the year (0-11)
<code>getDayIndex()</code>	Day of the week (0-6)
<code>getYearIndex()</code>	Year (e.g. 2017)

III. Definition

Write the Formula, giving variable names to all your input values.

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time(distance) = distance/80
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