

Who Developed the q  
progamming language?

What does q stand for?

Is q compiled or  
interpreted?

Is q dynamically or  
statically typed?

What paradigm is q?

What data structures is q  
based on?

What character is used for  
division?

What data type does  
division return?

What does vector  
programming in q mean?

Interpreted	Query	Arthur Whitney of Kx
Lists and dictionaries	Functional	Statically typed
q can do operations on numeric lists automatically	Float	%

How do you write a list in  
q?

What operator counts a list  
of values?

What kind of precedence  
does q use?

What order are operators  
evaluated in?

What operator generates a  
list of numbers?

How do you write a list of  
booleans in q?

How much storage does a  
boolean take?

How do you compare two  
values?

How are dates computed  
under the covers?

All operators have the same precedence	<code>count</code>	Spaces between values e.g. <code>10 20 30</code>
0s and 1s followed by a 'b'	<code>til</code>	Right to left
A count of days from the millenium and time from midnight	<code>a=b</code>	1 byte

What would happen if you compared a date with an integer?

How do you define a month?

How do you cast?

How do you add a list of numbers?

Is q declarative or imperative programming and why?

What is the / operator and what does it do?

What is the | operator and what does it do?

What is the & operator and what does it do?

What is \ and what does it do?

<p><code>`DATATYPE\$VALUE</code></p>	<p>For January 2000, like this <code>2000.01m</code></p>	<p>The interpreter would return a boolean because you can compare compatible underlying values</p>
<p>It is often called “over” or “fold” and it takes an arithmetic operator to its left and uses it to operate across a whole list rather than just two numbers</p>	<p>q is declarative programming because you type what you want to do not how to do it</p>	<p>Initialise to zero and add across the list: <code>0 +/ 10 20 30 40 50</code></p>
<p>Same as <code>/</code> but it keeps all the intermediate results</p>	<p>It returns the lesser of two values e.g. <code>x&amp;y</code></p>	<p>It returns the greater of two values e.g. <code>x y</code></p>

What are two examples of writing a function that squares 5?

How would you show 16 decimal places in the console?

How would you retrieve  $x$  items from a list?

How do you join lists together?

How would you compute the first 10 numbers of the fibonacci sequence?

What does **deltas** do?

How do you assign the variable **a** with the value 42?

What is a table?

What is a column?

<p>The <b>#</b> operator with a postive value retrieves <math>x</math> values from the start of the list and a negative values retrieves <math>x</math> values from the end of list</p>	<p><code>\P 16</code></p>	<p><code>{ [x] x*x }5</code> and <code>{ x*x }5</code></p>
<p><b>deltas</b> computes the successive differences across a numeric list</p>	<p><code>{ x, sum -2#x }/[10;1 1]</code></p>	<p>Using the <code>,</code> operator e.g.  <code>10 20 , 30 40 50</code></p>
<p>A list</p>	<p>A collection of columns</p>	<p><code>a:42</code></p>



How do you sort a table called <code>t</code> by time within date?	How do you time a statement?	How do you open port 4242?
How do you connect to port 4242 on the same machine?	How do you write the fourth Hitchhiker's book title to the file <code>/home/mike/hitchhiker</code>	How do you read the file <code>/home/mike/hitchhiker</code>

<p data-bbox="247 240 451 297">\p 4242</p>	<p data-bbox="846 207 1253 321">Prepend \t to the statement</p>	<p data-bbox="1480 248 2011 289">t:`date`time xasc t</p>
<p data-bbox="37 751 682 865">read0 `:/home/mike/hitchhiker</p>	<p data-bbox="741 686 1379 930">`:/home/mike/hitchhiker 0: ("So long and thanks for all the fish")</p>	<p data-bbox="1438 751 2060 865">hopen `::4242 or hopen `:localhost:4242</p>