The Queue constructor should take an initial set of items

I often create a Queue and then process it with a set of concurrent workers in threads. I end up writing:

```ruby
q = Queue.new
worklist.each do |work|
  q.push work
end
```

I'd rather be able to write

```ruby
q = Queue.new(*worklist)
```

Associated revisions

Revision 1f0e0dfb - 02/12/2021 03:21 AM - nobu (Nobuyoshi Nakada)
Thread::Queue.new should accept an Enumerable [Feature #17327]

Enumerable implements #to_a but not #to_array.

History

#1 - 11/15/2020 10:07 PM - chrisseaton (Chris Seaton)
https://github.com/ruby/ruby/pull/3768

#2 - 11/15/2020 10:11 PM - ioquatix (Samuel Williams)
What about a way to bulk add items, e.g. q.concat or whatever is the same for Array, and maybe it would be best to have the first argument as an array, e.g. Queue.new(worklist)? I think it's more expensive to expand it in CRuby when you write "worklist.

Internally, this might still be adding one item at a time, in order to invoke the right "wakeup" machinery.

#3 - 11/15/2020 10:13 PM - chrisseaton (Chris Seaton)
I'm not worried about Queue.new(worklist) or Queue.new("worklist), so that's fine if more people feel that way. I think the key thing is conciseness in text source code, and also avoiding needing to synchronise while adding each individual item.

#4 - 11/15/2020 10:50 PM - ioquatix (Samuel Williams)
That all makes sense to me.

#5 - 11/16/2020 09:11 AM - byroot (Jean Boussier)
I agree that the constructor should take an enumerable rather than variadic arguments, as it would be consistent with Set.new([1, 2, 3]), and Array.new([1, 2, 3]).

#6 - 11/16/2020 12:12 PM - ufuk (Ufuk Kayserilioglu)
Agreed with @byroot (Jean Boussier) (actually I was going to note the same, he beat me to it).

I would also like to note that different from Set, for example, the order of items in the supplied parameter matters in the Queue case. Even though the expected outcome is for the items to be pushed to the Queue in given order, it might still be a good idea to explicitly call that out in the method documentation.

#7 - 12/09/2020 11:04 AM - chrisseaton (Chris Seaton)
I updated to take a single array rather than a variable number of arguments.

I had two choices for how to do this - Set takes an Enumerable, using each to access items, and Array takes another Array, using #to_ary if needed.
I went with the same as what Array does, because both Array and Queue are core libraries, where Set is a standard library.

#8 - 01/13/2021 06:05 AM - matz (Yukihiro Matsumoto)
I accept the idea. Take Enumerable as initial values.
Matz.

#9 - 01/29/2021 08:50 AM - ko1 (Koichi Sasada)
- Assignee set to ko1 (Koichi Sasada)

#10 - 02/12/2021 04:36 AM - nobu (Nobuyoshi Nakada)
- Status changed from Open to Closed
Applied in changeset git|1f0e0dfb228fd14b3f6687539ba274ba6a2d1643.

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