GNUOCTAVECARD

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1 The very basics

+ | - | * | / | ^ | pi | i | inf | eps | sin | cos | tan | exp | log | log10 | abs | sqrt | sign | round | ceil | floor | fix | = | , | ; | who | clear | help | lookfor

```
Example> x = pi, y = floor (sin (x)), z = log (exp (2013)), z / inf
```

2 Vectors and matrices

: | .* | ./ | .^ | ' | .' | \ | length | numel | size | zeros | ones | eye | diag | rand | det | trace | inv | lu | eig | cond | expm

```
Example> x = 1:5, x(:), x(2:4), A = [11, 12; 21, 22], A(1,1:end)
```

3 Graphics

plot | semilogx | semilogy | loglog | contour | quiver | surf | mesh | meshgrid | xlabel | ylabel | zlabel | title | grid | axis | hold | subplot | figure | print

```
Example> t = 0:0.01*pi:21*pi; x = sin (t).*(exp (cos (t)) - 2*cos (4*t) + sin
(t/12).^5); y = cos (t).*(exp (cos (t)) - 2*cos (4*t) + sin (t/12).^5); plot(x, y)
```

4 Scripts and functions

@ | function | return | nargin | nargout | varargin | varargout | feval | eval

```
Example> f = @(x) x.^2, f(1:10)
Example> function v = cossum (x, n) v = cumsum (repmat (cos (x), 1, n));
```

5 Programming elements

== | > | < | >= | <= | != | | | || | & | && | ! | if | else | elseif | for | while | end | break | continue | pause

```
Example> for i = 1:5 if (i < 3) disp (i) else disp (i^2) end end
```