1.

```
octave:1> 7+3
ans = 10
octave:2> 89-9
ans = 80
octave:3> 4*7
ans = 28
octave:4> 88/22
ans = 4
octave:5> 3/7
ans = 0.4286
octave:6> 5^5
ans = 3125
```

2.

```
octave:7> 9^2+7^3*(3+8-9/3)*2^3
ans = 22033
octave:8> 8^2-7*2*(8+6)/2
ans = -34
octave:9> 2+3-5*6/(7-5)^5
ans = 4.0625
octave:10> 3*9/3-7^4*(7-3)
ans = -9595
```

3.

```
octave:11> 7-66+4*cos(0)
ans = -55
octave:12> cos(0)*33/3-67+8
ans = -48
octave:13> cos(0) + cos(0) + cos(0)
ans = 3
octave:14> 5600^cos(0)
ans = 5600
octave:15> 55 + 7/cos(0)
ans = 62
```

4.

```
octave:16> 78/sin(0)
ans = Inf
octave:17> 3/sin(0)
ans = Inf
octave:18> 5000000/sin(0)
ans = Inf
octave:19> 6.789789789/sin(0)
ans = Inf
```

5.

```
octave:20> w = [5,6,7;8,10,62;23,4,7]
w =

    5    6    7
    8   10   62
   23    4    7

octave:21> z = [9,8;4,5]
z =

   9   8
   4   5

octave:22> t = [7,6,5; 4,3,2]
t =

   7   6   5
   4   3   2

octave:23>
```

6.

```
octave:23> a = [9,3,4; 5,8,7]
a =

   9   3   4
   5   8   7

octave:24> b = [7,4,3; 8,7,2]
b =

   7   4   3
   8   7   2

octave:25> a+b
ans =

   16    7    7
   13   15    9
```

7.

```
octave:26> a = [2,3,4; 5,6,7]
a =

   2   3   4
   5   6   7

octave:27> b = [7,5,3; 8,1,2]
b =

   7   5   3
   8   1   2

octave:28> a-b
ans =

   -5   -2    1
   -3    5    5
```

8.

```
octave:29> 3i + 7 + 4i + 8
ans =  15 +  7i
octave:30> 3j +9i + 3j + 7 + 8i
ans =   7 + 23i
```

9.

```
octave:31> 3i * 5i
ans = -15
octave:32> 7j * 6i
ans = -42
octave:33> 4i * 8j
ans = -32
octave:34> 3 * 7i
ans =   0 + 21i
octave:35> 71j * 10
ans =    0 + 710i
octave:36> 3 * 9
ans = 27
```

10.

```
octave:37> log10(10)
ans = 1
octave:38> log10(2)
ans = 0.3010
octave:39> log10(-3)
ans =  0.4771 + 1.3644i
octave:40> log10(2) * log10(2)
ans = 0.090619
```

11.

```
octave:41> -7/i
ans =  0 + 7i
octave:42> -8/4i
ans =  0 + 2i
octave:43> -6j/3i
ans = -2
octave:44> -8/64j
ans =        0 + 0.1250i
```

12.

```
octave:45> [2, 4, 5, 7] - [1, 0, 1, 3]
ans =

   1   4   4   4

octave:46> [4, 3, 6, 3] + [2, 0, 1, 7]
ans =

   6   3   7   10

octave:47> [2, 3, 5] - [0, 0, 1]
ans =

   2   3   4

octave:48> [4, 3, 2] + [1, 1, 1]
ans =

   5   4   3
```

13.

```
octave:49> [2i, 4i, 3] * 6i
ans =

  -12 +  0i  -24 +  0i    0 + 18i

octave:50> [3, 9, 8j] / 4j
ans =

     0 - 0.7500i      0 - 2.2500i   2.0000 +       0i

octave:51> [-4, -5i, -8] / 4i
ans =

     0 + 1.0000i  -1.2500 +      0i       0 + 2.0000i

octave:52> [-9, -6, -3] * 2j
ans =

   0 - 18i    0 - 12i    0 -   6i
```

14.

log(2) = ln(2)

```
octave:53> log(2)
ans = 0.6931
octave:54> log10(2)
ans = 0.3010
```

15.

```
octave:56> (3^2 + 7*5 - 9/3) / (4^2 - 3*(8 - 7/2) + 6)
ans = 4.8235
octave:57> (3^2 + (7*5 - 9/3)) / ((4^2 - 3)*(8 - 7/2) + 6)
ans = 0.6357
```

16.

```
octave:58>
octave:58> ((7^3 - 5^2 * (3 + 2^4)) / (4 + 3^3)) ^ (1/3) + log10(100) * sin(pi/6)
ans =  1.8104 + 1.4037i
octave:59>
octave:59>
octave:59>
```

17

```
octave:61> A = [2, 4, 6; 8, 10, 12; 14, 16, 18];
octave:62> B = [1, 3, 5; 7, 9, 11; 13, 15, 17];
octave:63> A+B
ans =

    3    7   11
   15   19   23
   27   31   35

octave:64> A-B
ans =

   1   1   1
   1   1   1
   1   1   1

octave:65> A*B
ans =

   108   132   156
   234   294   354
   360   456   552
```

18.

```
octave:66> log 10(−5+3i)\log_{10}(-5 + 3i)log10 (−5+3i)
error: parse error:

  syntax error

>>> log 10(−5+3i)\log_{10}(-5 + 3i)log10 (−5+3i)
      ^
octave:66> e(4+5i)e^{(4 + 5i)}e(4+5i)
error: parse error:

  syntax error

>>> e(4+5i)e^{(4 + 5i)}e(4+5i)
          ^
octave:66> sin (5+2i)\sin(5 + 2i)sin(5+2i)
error: parse error:

  syntax error

>>> sin (5+2i)\sin(5 + 2i)sin(5+2i)
       ^
octave:66>
```

19.

```
octave:66> A = [2, 4, 6; 8, 10, 12; 14, 16, 18];
octave:67> B = [1, 3, 5; 7, 9, 11; 13, 15, 17];
octave:68>
octave:68> A+B
ans =

    3    7   11
   15   19   23
   27   31   35

octave:69> A-B
ans =

   1   1   1
   1   1   1
   1   1   1

octave:70> A*B
ans =

   108   132   156
   234   294   354
   360   456   552
```

20.

```
octave:71> diff1 = log10(100) - log(100);
octave:72> diff1
diff1 = -2.6052
octave:73> diff2 = log10(2.71828) - log(2.71828);
octave:74> diff2
diff2 = -0.5657
```

21.

```
octave:75> 15 + 25
ans = 40
octave:76> 350 - 125
ans = 225
octave:77> 18 * 12
ans = 216
octave:78> 55 / 8
ans = 6.8750
octave:79> 3^8
ans = 6561
```

22.

```
octave:80> 12^2 - 8*(15 - 4) + 3^4
ans = 137
octave:81> 5^3 + (25/5) * (9 - 3^2)
ans = 125
octave:82> (7 + 4) * ((3^2 - 5) / 2) + 10
ans = 32
```

23.

```
octave:83> cos(pi/4)
ans = 0.7071
octave:84> sin(pi/3) + tan(pi/6)
ans = 1.4434
octave:85> 2 * cos(pi/3) - 3 * sin(pi/6)
ans = -0.5000
octave:86>
```

24.

```
octave:86> [1,2,3;4,5,6]
ans =

   1   2   3
   4   5   6

octave:87> A = [3, 5; 7, 9];
octave:88> B = [1, 2; 4, 8];
octave:89> A+B
ans =

    4    7
   11   17

octave:90> X = [9, 8; 6, 4];
octave:91> Y = [3, 2; 1, 0];
octave:92> x-Y
error: 'x' undefined near line 1, column 1
octave:93> X-Y
ans =

   6   6
   5   4

octave:94> 5* [2, 3; 4, 6]
ans =

   10   15
   20   30
```

25.

```
octave:95> [1, 2, 3] .* [4, 5, 6]
ans =

    4   10   18

octave:96> [12, 24, 36] ./ [3, 6, 9]
ans =

   4   4   4

octave:97> (5 + 3i) + (2 - 4i)
ans =  7 - 1i
octave:98> (9 + 7i) - (3 + 2i)
ans =  6 + 5i
octave:99>  (2 + 3i) * (4 - 5i)
ans =  23 +  2i
octave:100> log10(100)
ans = 2
octave:101> log(exp(1))
ans = 1
octave:102> log(20) * log10(10)
ans = 2.9957
octave:103> [10, 20, 30] + [5, 15, 25]
ans =

   15   35   55

octave:104> [50, 60, 70] - [10, 20, 30]
ans =

   40   40   40

octave:105> 4 * [1, 2, 3]
ans =

    4    8   12

octave:106>  [2i, 3i, 4]*2
ans =

   0 + 4i   0 + 6i   8 + 0i

octave:107>  [6i, 9i, 12]
ans =

    0 +  6i    0 +  9i   12 +  0i

octave:108>  [6i, 9i, 12] * 3
ans =

    0 + 18i    0 + 27i   36 +  0i

octave:109>  [1, 2, 3] +  [2i, 3i, 4i]
ans =

   1 + 2i   2 + 3i   3 + 4i
```