```matlab
% this holds the frequenciy of all the piano notes
% INPUT:
% n: the index into the piano of the frequency you want, in Hz
function f = notes(n)

% the frequencies of keys 1 to 88 on a piano
piano = [27.5000,
29.1353,
30.8677,
32.7032,
34.6479,
36.7081,
38.8909,
41.2035,
43.6536,
46.2493,
48.9995,
51.9130,
55.0000,
58.2705,
61.7354,
65.4064,
69.2957,
73.4162,
77.7817,
82.4069,
87.3071,
92.4986,
97.9989,
103.826,
110.000,
116.541,
123.471,
130.813,
138.591,
146.832,
155.563,
164.814,
174.614,
184.997,
195.998,
207.652,
220.000,
233.082,
246.942,
261.626,
277.183,
293.665,
311.127,
329.628,
349.228,
```

```
52    369.994,
53    391.995,
54    415.305,
55    440.000,
56    466.164,
57    493.883,
58    523.251,
59    554.365,
60    587.330,
61    622.254,
62    659.255,
63    698.456,
64    739.989,
65    783.991,
66    830.609,
67    880.000,
68    932.328,
69    987.767,
70    1046.50,
71    1108.73,
72    1174.66,
73    1244.51,
74    1318.51,
75    1396.91,
76    1479.98,
77    1567.98,
78    1661.22,
79    1760.00,
80    1864.66,
81    1975.53,
82    2093.00,
83    2217.46,
84    2349.32,
85    2489.02,
86    2637.02,
87    2793.83,
88    2959.96,
89    3135.96,
90    3322.44,
91    3520.00,
92    3729.31,
93    3951.07,
94    4186.01];
95
96    f = piano(n);
97
```