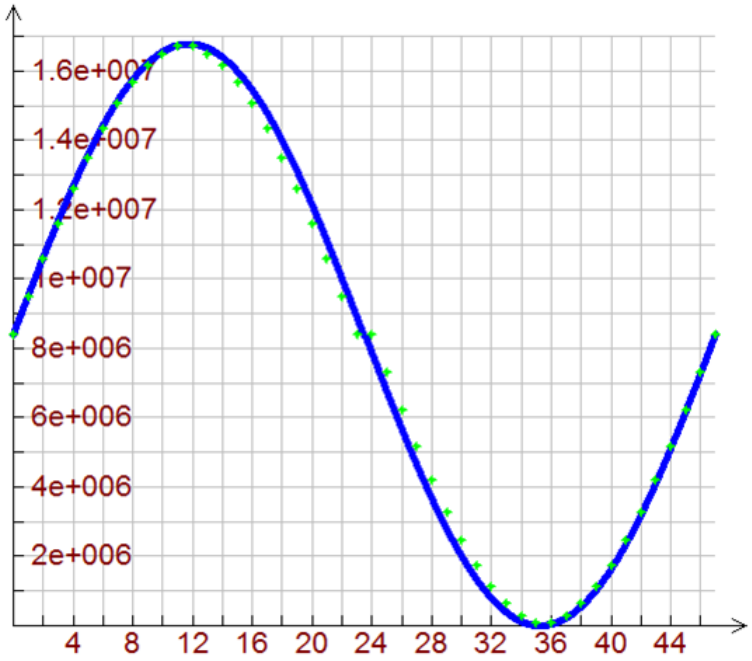
Kodeudsnit 1: Sinus generation for data output

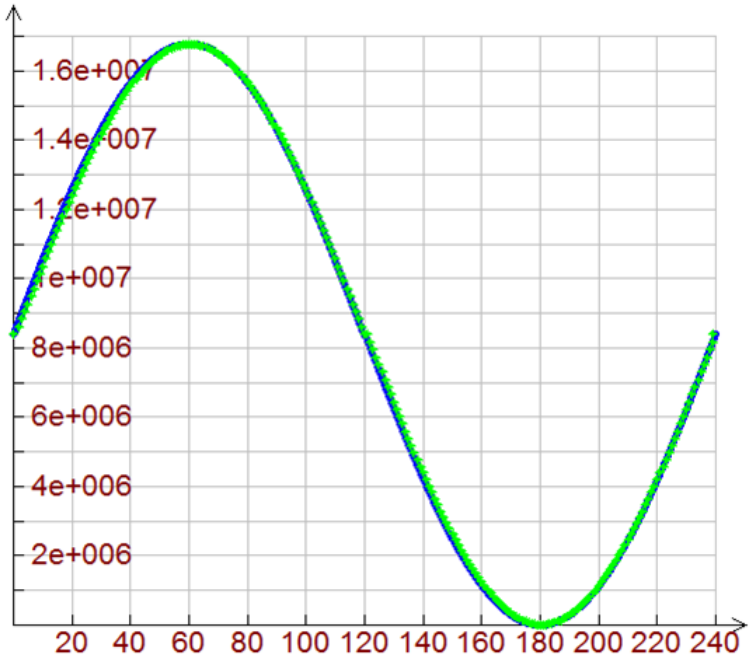
```
// Write number of samples to RAM-controller
sendNumberOfSamples(full_samples);

// FIRST QUARTER
for(sample_i = 0; sample_i < quarter_samples; sample_i++)
{
  // Calculating first quarter. This array will be used for the remaining quarters
  quarter_sound_samples[sample_i] = (1+sin((sample_i*2*PI)/(full_samples)))*HALF_MAX_CODEC_SIZE;
  sendNextSample(quarter_sound_samples[sample_i]);
  printf("%u,",quarter_sound_samples[sample_i]);
}

// SECOND QUARTER
for(sample_i = quarter_samples; sample_i > 0; sample_i--)
{
  current_sample = quarter_sound_samples[sample_i-1];
  sendNextSample(current_sample);
  printf("%u,",quarter_sound_samples[sample_i-1]);
}

// THIRD QUARTER
for(sample_i = 0; sample_i < quarter_samples; sample_i++)
{
  current_sample = MAX_CODEC_SIZE-quarter_sound_samples[sample_i];
  sendNextSample(current_sample);
  printf("%u,", MAX_CODEC_SIZE-quarter_sound_samples[sample_i]);
}

// FOURTH QUARTER
for(sample_i = quarter_samples; sample_i > 0; sample_i--)
{
  current_sample = MAX_CODEC_SIZE-quarter_sound_samples[sample_i-1];
  sendNextSample(current_sample);
  printf("%u,",MAX_CODEC_SIZE-quarter_sound_samples[sample_i-1]);
}
```

0.1 SinusGraf 1 kHz



Figur 1: 48 samples svarende til en frekvens på 1000 Hz. Punkterne er output fra vores program og linjen er den ønskede kurve.

0.2 SinusGraf 200 Hz



Figur 2: 240 samples svarende til en frekvens på 200 Hz. Punkterne er output fra vores program og linjen er den ønskede kurve.