

1. Consider a system where the DAC is updated every 4us (250 kHz) with a value from a 200- element wave table containing a single cycle of a waveform. What would be the frequency of the output wave?

$$250 \text{ Khz}/200 = 1250\text{Hz}$$

2. Consider that the ADC in 12-bit mode divides the input voltage range (0-3V) into 4096 steps

(where 0V is 0, and 3V is 4095).

- What is the voltage/measurement resolution (how much does the voltage change per bit) of the ADC?

$$\text{Resolution} = 0.73\text{mV/bit}$$

- What would be the ADC output value (nearest integer) if the input voltage was 1.75V?

$$\text{ADC o/p voltage} = 2389$$