

**Student handout**

1. Sketch the following functions from 0 to  $L$ :

$$f_1(x) = \frac{1}{4} \sin \frac{2\pi x}{L}$$

$$f_2(x) = \frac{1}{2} \sin \frac{6\pi x}{L}$$

2. Sketch  $f_1 + f_2$  from  $x = 0$  to  $x = L$