

This has the repeating hill and valley pattern of the graph of a cosine function. The amplitude of this graph and  $y = \frac{3}{2}\cos 4x$  is  $\frac{3}{2}$ . This graph has 2 cycles on the interval  $[0, \pi]$ , so a period of  $\frac{\pi}{2}$ .

The function  $y = \frac{3}{2}\cos 4x$  has a period of  $\frac{2\pi}{4} = \frac{\pi}{2}$ . So the graph and the function match.