

40/

$$y = C_1 \cos(2x) + C_2 \sin(2x)$$

~~Apply~~ $y(0) = 0$ $y(\pi) = 0$

$$C_1 \cos(0) + C_2 \sin(0) = 0$$

$$C_1 \cos(\pi) + C_2 \sin(\pi) = 0$$

$C_1 = 0$
$C_1 = 0$

$$y = C_2 \sin(\cancel{\pi}^{2x})$$