WRITE YOUR NAME:

MAC 2302 Quiz 1
Tuesday September 3rd

Verify that $y = 17\sin x + 83\cos x$ is a solution of the differential equation

$$y'' = -y$$

$$y = 17\sin x + 83\cos x$$
$$\Rightarrow y' = 17\cos x - 83\sin x$$
$$\Rightarrow y'' = -17\sin x - 83\cos x$$

Notice that this is the same as $-y = -(17\sin x + 83\cos x)$.
Therefore y is a solution.