

Exercise 10

- (a) Let $\phi(x)$ be a continuous function on $(0, l)$. Under what conditions is its *odd* extension also a continuous function?
- (b) Let $\phi(x)$ be a differentiable function on $(0, l)$. Under what conditions is its *odd* extension also a differentiable function?
- (c) Same as part (a) for the *even* extension.
- (d) Same as part (b) for the *even* extension.