

## References

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- (a) In this case, the wavefunction does not penetrate the side walls and  $\psi(0) = \psi(a) = 0$ . Show that  $\psi(x) = \sin(n\pi x/a)$  satisfies both Eq. (6.21) and the boundary conditions. What values may  $n$  have?
- (b) Normalize  $\psi(x)$ .
- (c) Plot several wavefunctions with the three smallest  $n$  values and compare them with Fig. 3.2 for standing waves on a string.