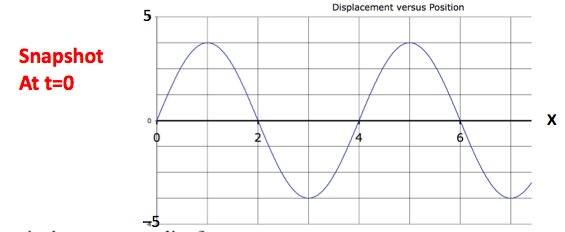
**Worksheet 19 wave equation and phase constant Name:**

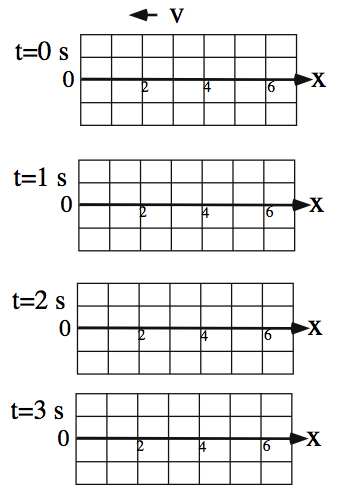
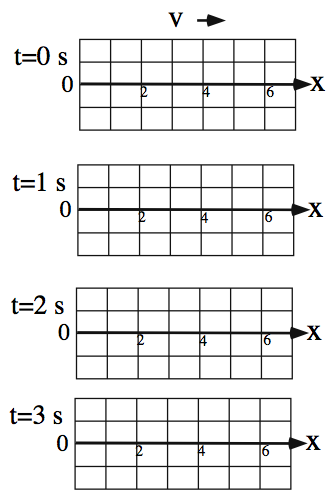
Relevant textbook sections covered: 20.2, 20.3, 20.4



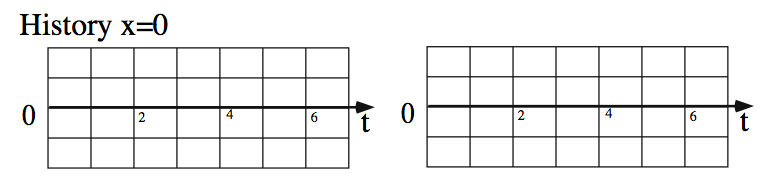
1) Which way is the wave traveling?

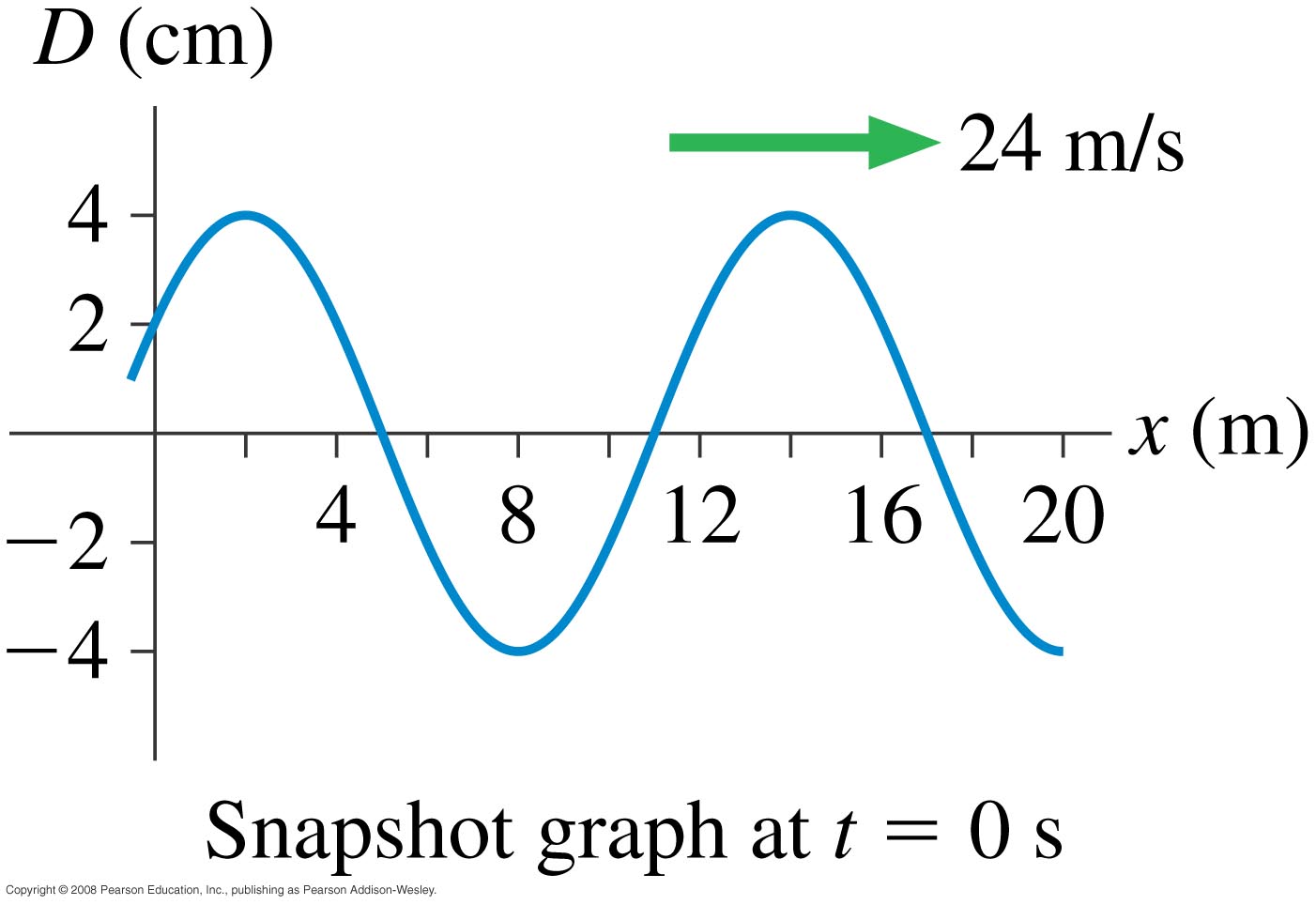
Shown here is a snapshot graph for t = 0 s.

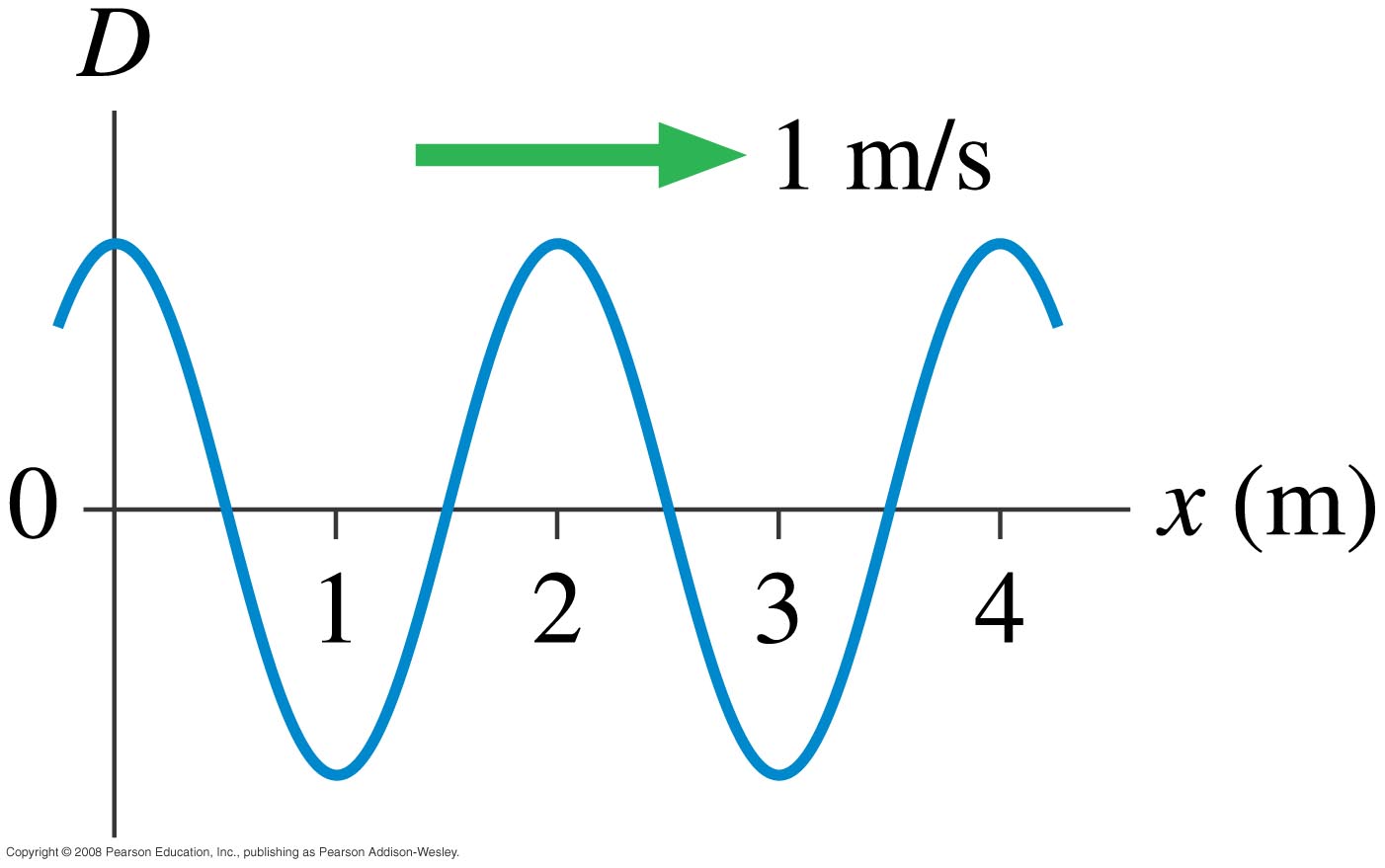
a) Plot a series of snapshot graphs for the wave moving to the left and moving to the right.



b) Use the point x = 0 in each graph to draw a corresponding history graph.



2) What are the amplitude, wavelength, frequency, and phase constant of the traveling wave in the figure? The wave is traveling to the right with a velocity v = 24 m/s.



(cm)

3) Now consider a *different wave* with a

1

snapshot graph at t = 1 s. What is the phase

constant of this wave?

-1