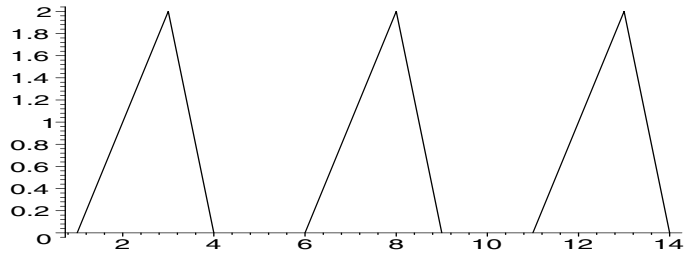
59. (a) Recalling the discussion in §17-5, we see that the speed of the wave given by a function with argument $x - 5t$ (where x is in centimeters and t is in seconds) must be 5 cm/s.

(b) In part (c), we show several "snapshots" of the wave: the one on the left is as shown in Figure 17-47 (at $t = 0$), the middle one is at $t = 1.0$ s, and the rightmost one is at $t = 2.0$ s. It is clear that the wave is traveling to the right (the $+x$ direction).

(c) The third picture in the sequence below shows the pulse at 2 s. The horizontal scale (and, presumably, the vertical one also) is in centimeters.



(d) The leading edge of the pulse reaches $x = 10$ cm at $t = (10 - 4)/5 = 1.2$ s. The particle (say, of the string that carries the pulse) at that location reaches a maximum displacement $h = 2$ cm at $t = (10 - 3)/5 = 1.4$ s. Finally, the the trailing edge of the pulse departs from $x = 10$ cm at $t = (10 - 1)/5 = 1.8$ s. Thus, we find for $h(t)$ at $x = 10$ cm (with the horizontal axis, t, in seconds):