

Problem #1

Fine.

Problem #2

(b) Your form of the solution is a bit hard to parse from the way you've written q(x,t), but it is correct. It would be nicer to draw an x-t plane figure with the sectors shown where q is constant and then give the constant values.

Problem #13.11

(c) You showed in (b) that both fields a linearly degenerate, so there are not shocks or rarefaction waves, only contact discontinuities.

Relate to Figure 9.1? Note that intermediate state $Q_{i-1/2}^*$ in that figure and (9.26) agrees with intermediate state computed in this problem. $\boxed{-2}$

Problem #15.2

Fine.