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## Examples

- (1) The mass flow rate of crude oil at the entrance of the Alaskan Pipeline is measured to be 76.4 lbm/min. There are no leaks, no other entrances, or chemical reactions taking place in the pipeline. There is only one outlet. What is the mass flow rate at the outlet?
  
- (2) A baseball stadium can hold a maximum of 55,000 spectators. Before the gates open for a game, there are 200 stadium personnel in the stadium. When the gates open, players, spectators and media all enter the stadium. Fifty (50) baseball players enter the stadium, and 500 times more spectators than media enter the stadium. During the game,  $\frac{1}{4}$  of the spectators leave. There are 30,000 spectators at the end of the game. No players, stadium personnel or media leave. Use a conservation and accounting framework to calculate the total number of people in the stadium at the end of the game.