

Physics 202

Group Quizbit | Fluids

Work as a group to produce a single handwritten solution to these questions. Start with fundamental principles and using multiple representations to communicate understanding of the physics.

1. Most IV infusions work using gravity. What is the minimum height that an IV bag must be placed above an entry point for the IV fluid to flow? Assume the bag is collapsible and that blood has a pressure of 18 mm Hg and there is 133 Pa per 1 mm Hg.
2. A cylinder has a frictionless piston of mass $m_1 = 0.50$ kg and radius 2.5 cm fitted inside it. This mass is then attached via a light rope that passes over two massless, frictionless pulleys to another block $m_2 = 9.5$ kg, as shown in the figure. The piston is open at the top and has a pump creating a reduced but constant pressure below m_1 . If the block falls from rest a distance of 1.25 m in 3.30 s, what is the pressure beneath the piston?



