

Ch 10 Answers

10.12 h_L determined from manometer reading = 1.8 m of water, $f = 0.0491$

10.14 (*all answers from careful inspection of Moody Diagram*)

a. True

b. False (depends on Re, $k_s = 0$)

c. True

d. False ($f = 0.011$)

e. False ($f = 0.06$)

f. False ($k_s = 0.046$ mm)

10.42 $f = 0.026$, $h_L = 38.2$ m, $p_A = 768$ kPa

10.47 $f = 0.0191$, $h_L = 3.64$ m, $\Delta p = 1.58$ psi, power = 0.0675 hp

10.59 $h_L = 0.8226$ m

Iterative solution: $f = 0.0248$, $Q = 0.0066$ m³/s