

Variables

$\gamma_{ea}(\text{lb/ft}^3)=$ 49.01
 $\gamma_m(\text{lb/ft}^3)=$ 844.9
 $Q(\text{ft}^3/\text{s})=$ 0.557
 $A_{\text{pipe}}(\text{ft}^2)=$ 0.02333
 $p_B(\text{lb/ft}^2)=$ 5760

Problem 1:

$h_1(\text{ft})=$ 38
 $h_2(\text{ft})=$ 18

Answers:

$p_A(\text{psi})=$ 52.38
 $h(\text{ft})=$ 2.322

Problem 3:

$Q(\text{ft}^3/\text{s}):$	$p(\text{lb/ft}^2):$	$p(\text{psi}):$
0.5	7439.30	51.662
0.6	7746.90	53.798
0.7	8110.44	56.322
0.8	8529.90	59.235
0.9	9005.28	62.537
1	9536.60	66.226
1.1	10123.84	70.304
1.2	10767.02	74.771
1.3	11466.12	79.626

Answer:

1.2 ft^3/s or 538 gpm

Flow Rate vs Pressure

