Part 1

K.A

$$n = \frac{Q \Delta P}{P_{in}}$$

1) $P_1 = P_{in} = 16 Hp$

$P_{res} \uparrow = 34 \text{ lbf/in}^2$

flow rate = 2.139 m^3/min

2) 239 KW of power

Avg Velo = 11 911 in/min

760 mm of Hg to 915 mm of Hg

3) 55061 US gal/hr → 0.0578968 22 $\frac{m^3}{s}$

29039 Btu/hr → ~~8510.4908 W~~

16 psi → 2 atm → ~~202650 Pa~~ 110316 KPa =