

Chapter 17:

**17.4** 98.8 mm.

17.6:  $\theta = 13.26$  rev

**17.8** 19.77 rev.

**17.13** 80.7 lb  $\downarrow$ .

**17.17** 3.27 rad/s  $\downarrow$ .

17.19:  $\omega = (12)^{0.25} \sqrt{g/L}$ ,  $C_y = 2mg$ ,  $C_x = 0$

17.23:  $d = 0.1817$  m

17.31:  $V_a = 7.43$  ft/s,  $T_1 = 4.0$  lb

**17.34** 1.000 m/s  $\rightarrow$ .

**17.37** 4.82 m/s  $\rightarrow$ , 0.

**17.42** (a)  $0.926 \sqrt{gL}$   $\leftarrow$ . (b)  $1.225 \sqrt{gL}$   $\leftarrow$ .

**17.45** 84.7 rpm  $\downarrow$ .

**17.55** 2.84 s.

**17.59**  $(1 + \mu_k^2) r \omega_0 / 2\mu_k(1 + \mu_k)g$ .

**17.63** (a)  $\omega_A = 686$  rpm  $\uparrow$ ,  $\omega_B = 514$  rpm  $\downarrow$ . (b) 4.18 lb  $\cdot$  s  $\uparrow$ .

**17.71** (a) 2.55 m/s  $\uparrow$ . (b) 10.53 N

**17.75** (a) 0.557 s. (b) 16.82 N.