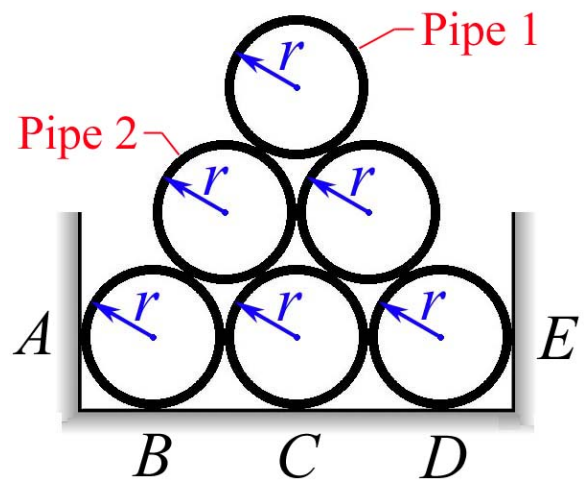Six identical pipes, each weighing 60 lb, are stacked and supported as shown. Neglecting friction, determine *(a)* the magnitude F_1 of the contact force between pipe 1 and pipe 2, *(b)* the magnitude F_2 of the contact force between pipe 2 and the lower left pipe, *(c)* the reaction **A** at A, *(d)* the reaction **B** at B.

FBD for pipe 1: ①

FBD for pipe 2: ①

FBD for lower left pipe: ②

$$F_1 = \frac{60}{\sqrt{3}} = 34.64 \qquad \boxed{F_1 = 34.6 \text{ lb}} \quad ②$$

$$F_2 = \frac{120}{\sqrt{3}} = 69.28 \qquad \boxed{F_2 = 69.3 \text{ lb}} \quad ②$$

$$A_x = \frac{60}{\sqrt{3}} = 34.64 \qquad \boxed{\mathbf{A} = 34.6 \text{ lb} \rightarrow} \quad ①$$

$$B_y = 120 \qquad \boxed{\mathbf{B} = 120 \text{ lb} \uparrow} \quad ①$$