1-11

From a free-body diagram of the brake pedal, the equilibrium equations are solved to get the forces

$$\circlearrowleft \Sigma M_A = 0: \qquad 5.5Q - (30\cos 30°)(11) - (30\sin 30°)(4) = 0$$

$$Q = 62.871 \text{ lb}$$

$$\rightarrow \Sigma F_x = 0: \qquad A_x - Q + 30\cos 30° = 0$$

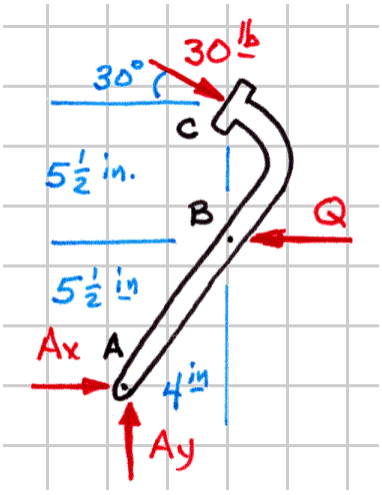
$$A_x = 36.890 \text{ lb}$$

$$\uparrow \Sigma F_y = 0: \qquad A_y - 30\sin 30° = 0$$

$$A_y = 15.00 \text{ lb}$$

A = 39.8 lb ◢ 22.13° ..... **Ans.**

Q = 62.9 lb ← ..... **Ans.**



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