



Fig. P2.99, P2.100, P2.101, and P2.102

**2.99** Three cables are used to tether a balloon as shown. Determine the vertical force  $\mathbf{P}$  exerted by the balloon at A knowing that the tension in cable AB is 259 N.

**2.100** Three cables are used to tether a balloon as shown. Determine the vertical force  $\mathbf{P}$  exerted by the balloon at A knowing that the tension in cable AC is 444 N.

**2.101** Three cables are used to tether a balloon as shown. Determine the vertical force  $\mathbf{P}$  exerted by the balloon at A knowing that the tension in cable AD is 481 N.

**2.102** Three cables are used to tether a balloon as shown. Knowing that the balloon exerts an 800-N vertical force at A, determine the tension in each cable.