

Section

8-1

HOLT PHYSICS

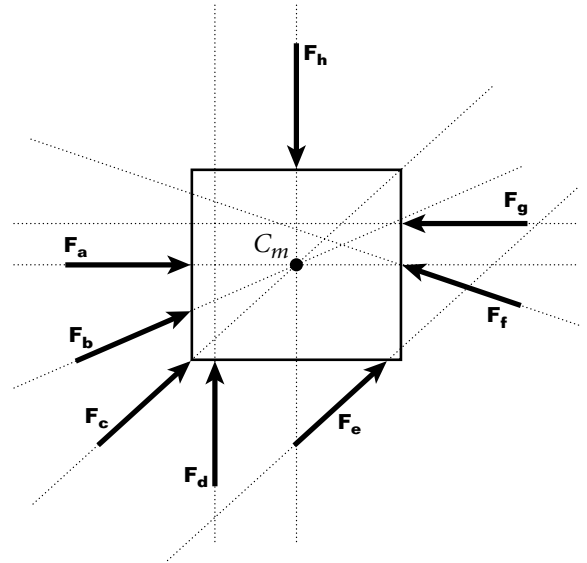
Concept Review

Torque

1. Use the diagram at right to complete the following items. The arrows represent force vectors, and the dashed lines represent the lines of action of the forces.

a. Identify the forces that exert a torque on the object.

b. Redraw the diagram, and include only the forces that exert a torque on the object.



c. If each force has the same magnitude, which force exerts the largest torque? Explain your answer.

2. Two people pull on the knobs on opposite sides of a door. Sherry pulls from the inside of the door with a force of 145 N at a 90.0° angle to the door. José pulls from the outside with a 165 N force at an angle of 45.0° to the door. The doorknob is 83.0 cm from the hinge.

a. Calculate the torque Sherry exerts on the door. _____

b. Calculate the torque José exerts on the door. _____

c. Will the door rotate toward Sherry or toward José? Explain your answer.
