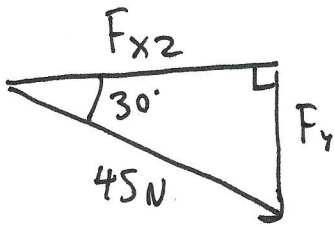
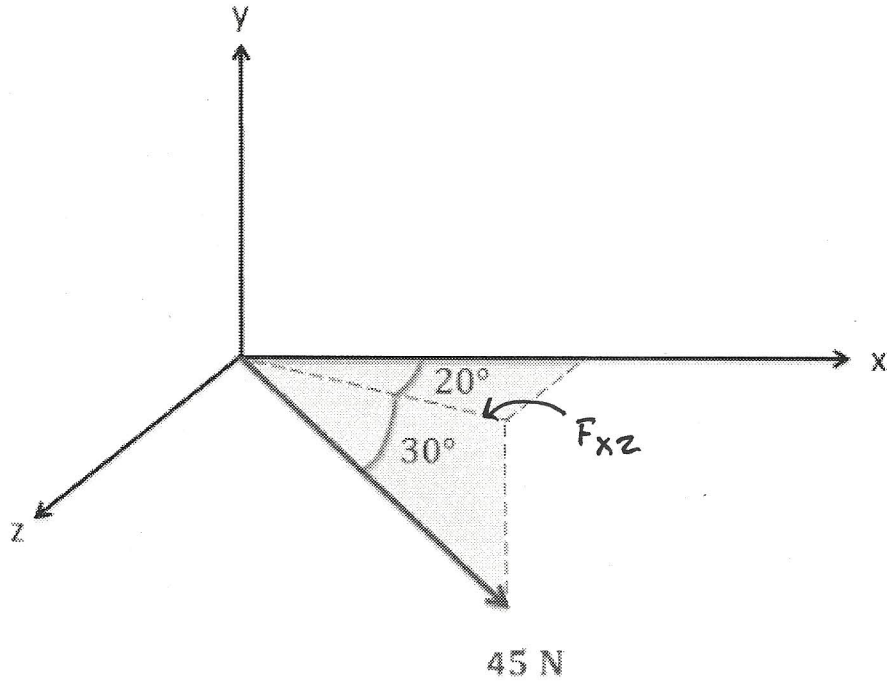


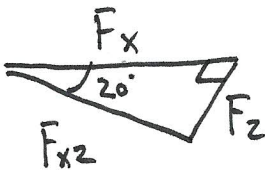
**Question 4:**

Determine the x, y, and z components of the force vector shown below.



$$F_{xz} = 45 \cos(30) = 38.97 \text{ N}$$

$$F_y = 45 \sin(30) = -22.5 \text{ N}$$



$$F_x = F_{xz} \cos(20) = 36.62 \text{ N}$$

$$F_z = F_{xz} \sin(20) = 13.33 \text{ N}$$

$$F = [36.62, -22.5, 13.33] \text{ N}$$