42. (a) We apply Eq. 11-26:

$$I_x = \sum_{i=1}^{4} m_i y_i^2 = 50(2.0)^2 + (25)(4.0)^2 + 25(-3.0)^2 + 30(4.0)^2 = 1.3 \times 10^3 \text{ g}\cdot\text{cm}^2 \ .$$

(b) For rotation about the y axis we obtain

$$I_y = \sum_{i=1}^{4} m_i x_i^2 = 50(2.0)^2 + (25)(0)^2 + 25(3.0)^2 + 30(2.0)^2 = 5.5 \times 10^2 \text{ g}\cdot\text{cm}^2 \ .$$

(c) And about the z axis, we find (using the fact that the distance from the z axis is $\sqrt{x^2 + y^2}$)

$$I_z = \sum_{i=1}^{4} m_i (x_i^2 + y_i^2) = I_x + I_y = 1.3 \times 10^3 + 5.5 \times 10^2 = 1.9 \times 10^2 \text{ g}\cdot\text{cm}^2 \ .$$

(d) Clearly, the answer to part (c) is $A + B$.