53. (a) The magnitude of the magnetic moment vector is

$$\mu = \sum_n i_n A_n = \pi r_1^2 i_1 + \pi r_2^2 i_2 = \pi(7.00\,\text{A})[(0.300\,\text{m})^2 + (0.200\,\text{m})^2] = 2.86\ \text{A}\cdot\text{m}^2\ .$$

(b) Now,

$$\mu = \pi r_1^2 i_1 - \pi r_2^2 i_2 = \pi(7.00\,\text{A})[(0.300\,\text{m})^2 - (0.200\,\text{m})^2] = 1.10\ \text{A}\cdot\text{m}^2\ .$$