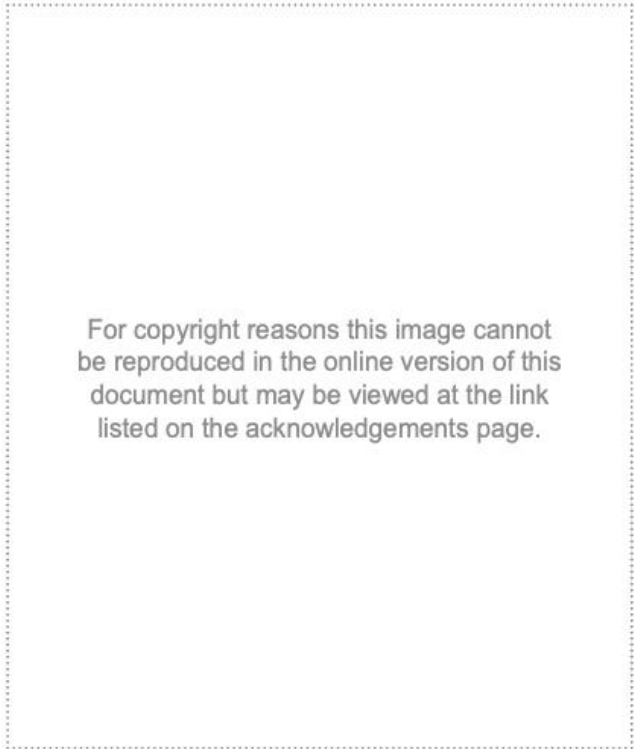


Question 3

(4 marks)

A DC electric motor is shown in the diagram below. A current of 3.50 A is running through the single rectangular loop, which is pictured at  $45.0^\circ$  to a uniform 1.52 mT horizontal magnetic field.



Calculate the magnitude and give the direction of the forces on sides AB and CD of the loop, using the directions provided in the table below. Write your answers in the table below.

Side	Force (N)	Direction (up, down, left, right, into the page, out of the page, no force)
AB		
CD		