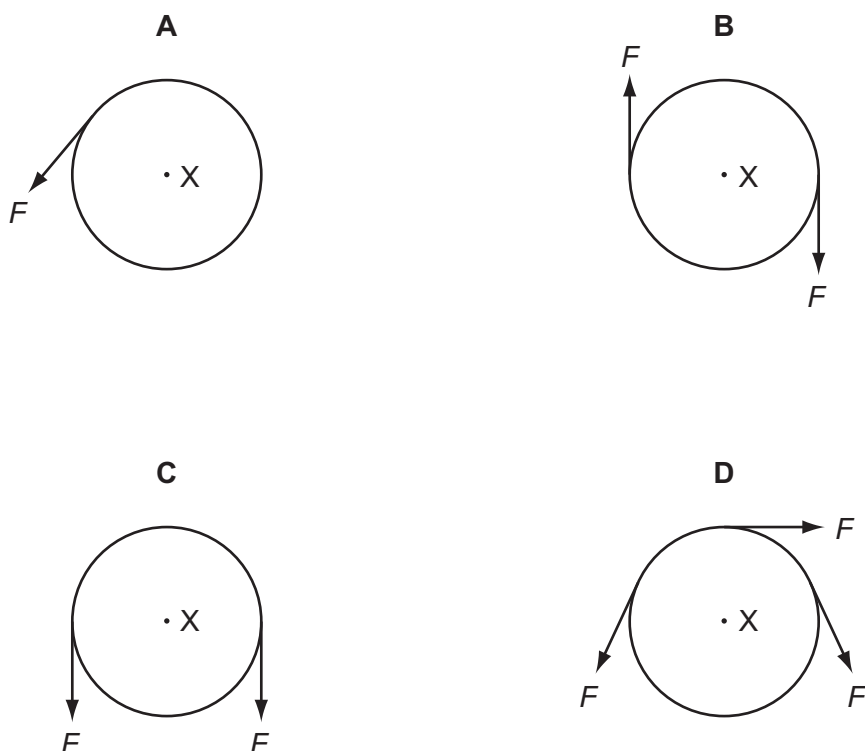
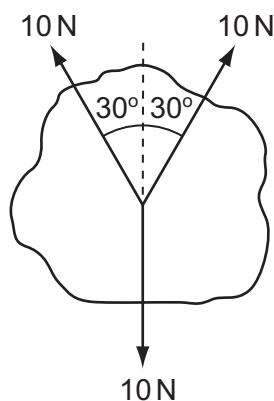


- 14** A rigid circular disc of radius  $r$  has its centre at  $X$ . A number of forces of equal magnitude  $F$  act at the edge of the disc. All the forces are in the plane of the disc.

Which arrangement of forces provides a moment of magnitude  $2Fr$  about  $X$ ?



- 15** Three coplanar forces, each of magnitude 10 N, act through the same point of a body in the directions shown.



What is the magnitude of the resultant force?

- A** 0 N      **B** 1.3 N      **C** 7.3 N      **D** 10 N
- 16** To get to his office from the entrance of the building, a man has to walk up six flights of stairs. The height of each flight is 2.5 m and the man has a mass of 80 kg.

What is the approximate gain in the man's gravitational potential energy during the climb?

- A** 1200 J      **B** 2000 J      **C** 4800 J      **D** 12 000 J