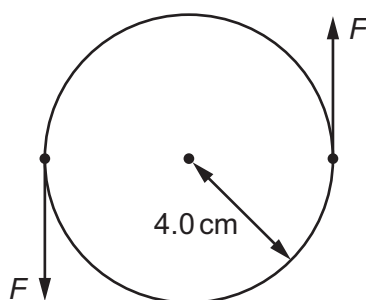
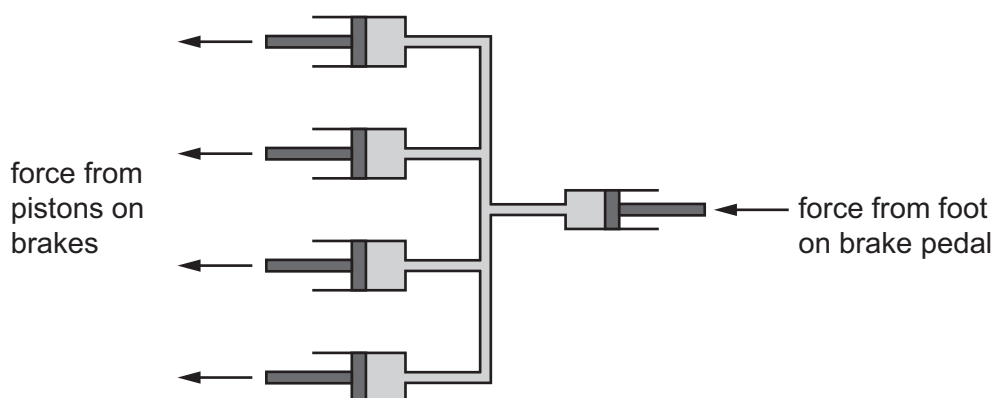


- 15 A minimum torque of 20 N m must be applied to the lid of a jar for it to open. The radius of the lid is 4.0 cm.



What is the minimum force F that must act on each side of the lid in order to open it?

- A** 2.5 N **B** 5.0 N **C** 250 N **D** 500 N
- 16 The diagram shows the brake system of a car.



The pipes are filled with incompressible liquid. When a force is applied to the brake pedal, the pressure in the liquid increases and applies a force to each of the four wheels.

The area of the piston connected to the brake pedal is 8 cm^2 .

The area of each piston connected to the brakes is 12 cm^2 .

A force of 800 N is applied by the foot to the brake pedal.

What is the force applied to each brake?

- A** 300 N **B** 530 N **C** 1200 N **D** 4800 N