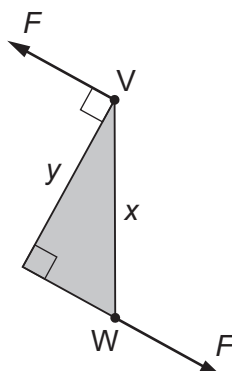


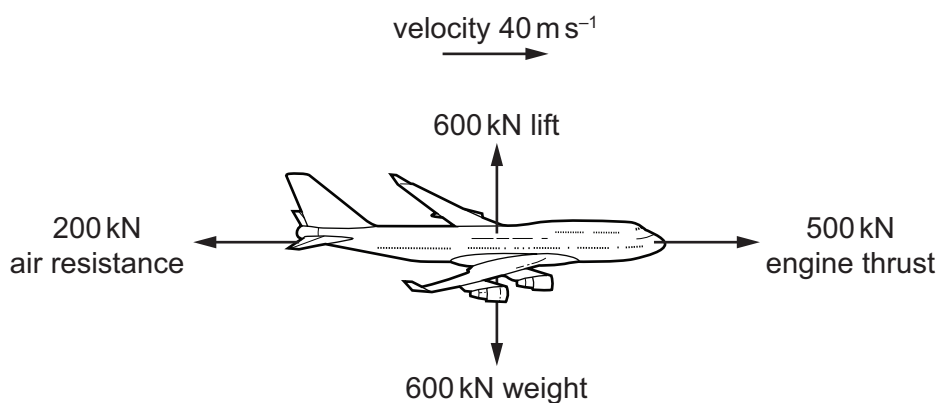
- 13 Two forces, each of magnitude F , act at points V and W on an object.

The two forces form a couple. The shape of the object is a right-angled triangle with sides of lengths x and y , as shown.



Which expression gives the torque exerted by the couple?

- A** Fx **B** Fy **C** $2Fx$ **D** $2Fy$
- 14 A giant squid of length 20.0 m is vertical in seawater, with the top of the squid at a depth of 8.00 m. The density of seawater is 1050 kg m^{-3} .
- What is the difference in pressure between the top and the bottom of the squid?
- A** 82 000 Pa **B** 206 000 Pa **C** 288 000 Pa **D** 389 000 Pa
- 15 The force diagram shows an aircraft accelerating. At the instant shown, the velocity of the aircraft is 40 m s^{-1} .



At which rate is its kinetic energy increasing?

- A** 2.4 MW **B** 8.0 MW **C** 12 MW **D** 20 MW
- 16 A man is running in a straight line.
- What is an approximate value of his kinetic energy?
- A** 10 J **B** 100 J **C** 1000 J **D** 10000 J