

Q1. (2018)

07

Figure 10 shows the horizontal forces acting on a man swimming in the sea.

Figure 10



a)

07.1

Describe the movement of the man when the resultant horizontal force is 0 N

[1 mark]

b)

07.2

The man increases Force A.

Explain what happens to Force B and to the movement of the man.

[4 marks]

Q2. (2018)

a)

07.3

A boat moves through the sea.

There is a 3000 N force to the west on the boat.

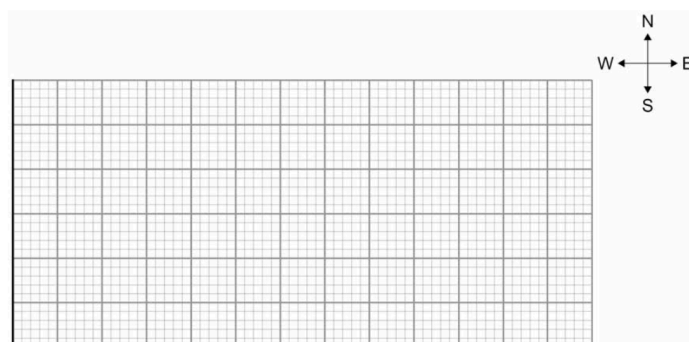
There is a 1000 N force to the south on the boat.

Determine the magnitude and direction of the resultant force on the boat.

Draw a vector diagram of these forces to scale on Figure 11

[3 marks]

Figure 11



Magnitude of resultant force = _____ N

Direction of resultant force = _____ °

b)

07.4

The force to the south on the boat increases.

What effect does this have on the resultant force on the boat?

[2 marks]