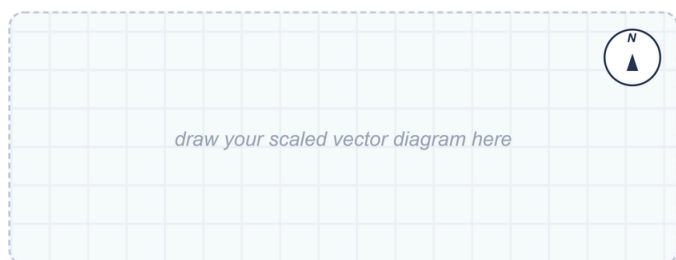


Vector Diagrams of Forces

Scaled Drawing: Resultant Force

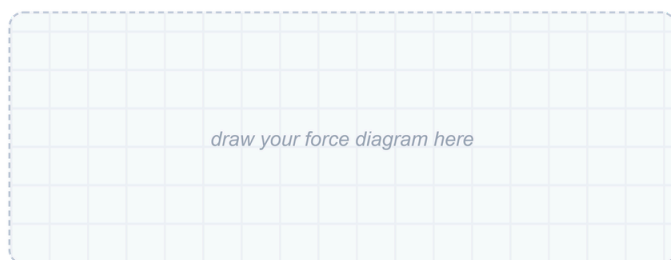


Scale = _____

Resultant force = _____ N

Direction = _____

Resolve into Components



Force = _____ N

Force vertical = _____ N

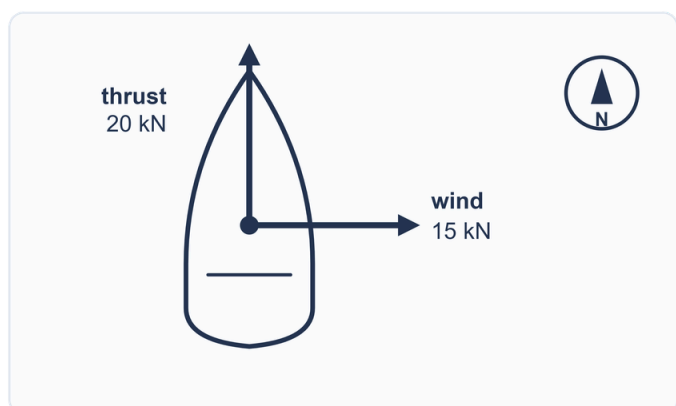
Force horizontal = _____ N

PROTRACTOR

Where a direction is asked for, measure the angle **clockwise from North** with a protractor and give it as a **three-figure bearing** — e.g. 037°, not 37°.

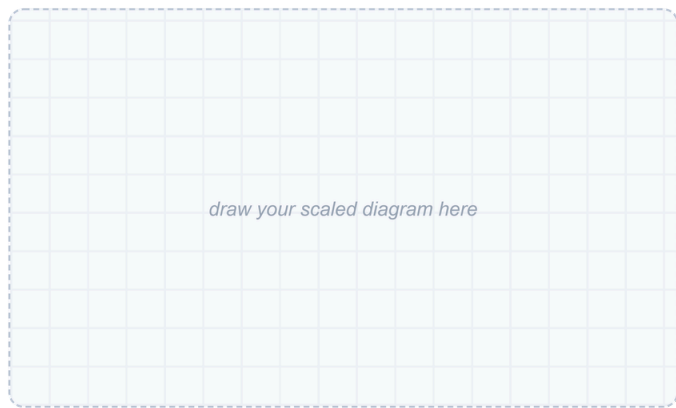
Exam-Style Question 1

[4 marks]



The diagram shows a boat from above. The **thrust** from the engine and the force of the **wind** both act at the centre of the boat.

Using a scale of **1 cm = 5 kN**, draw a scaled vector diagram to find the **resultant force** on the boat.

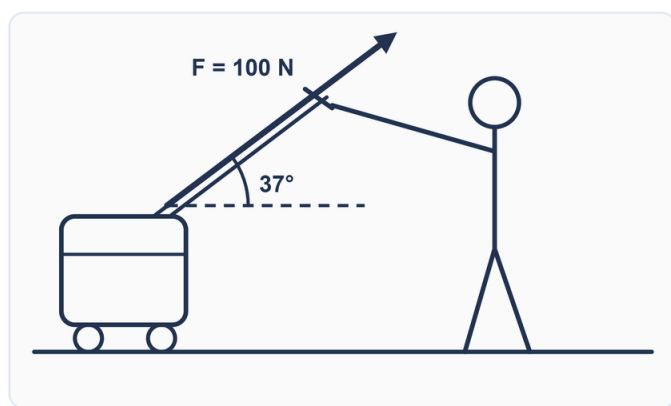


Resultant force = _____ kN

Bearing = _____

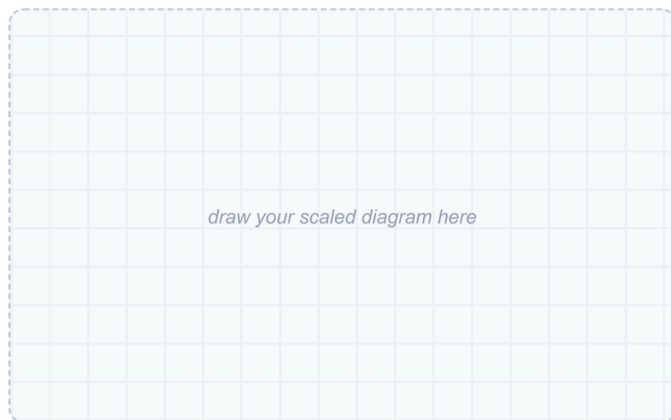
Exam-Style Question 2

[3 marks]



A person pulls a suitcase using the extended handle. The handle is at **37°** to the horizontal and the pulling force is **100 N**.

Using a scale of **1 cm = 20 N**, draw the **horizontal and vertical components** of the pulling force, and use them to find the component of the force along the ground.



Force along the ground (horizontally) = _____ N