

Units, Scalars and Vectors

Instructions: Write the correct unit for each quantity, then tick **Scalar** or **Vector**. Quantities marked * are **Physics (P)** only.

Scalar Quantities

DEFINITION

USE THESE WORDS **magnitude (size)** **only** **no direction**

LIST SIX EXAMPLES

Vector Quantities

DEFINITION

USE THESE WORDS **magnitude (size)** **and** **a direction**

LIST SIX EXAMPLES

Units — and Is It a Scalar or a Vector?

tick one box in each row

Quantity	Unit	Scalar	Vector
mass		☐	☐
distance		☐	☐
displacement		☐	☐
speed		☐	☐
velocity		☐	☐
acceleration		☐	☐
time		☐	☐
force		☐	☐
weight		☐	☐
gravitational field strength, g		☐	☐

Quantity	Unit	Scalar	Vector
momentum*		☐	☐
change in momentum*		☐	☐
moment of a force*		☐	☐
energy		☐	☐
work done		☐	☐
power		☐	☐
density		☐	☐
current		☐	☐
potential difference		☐	☐
temperature		☐	☐

* Physics (P) only — not needed for the Double Award.

Results — Finish the Unit, Then Decide

if it can change direction, it is a vector

Result — write the unit	Can it change direction?	Is it a vector?
Force = 20 _____	☐ Y ☐ N	☐ Y ☐ N
Mass = 4.5 _____	☐ Y ☐ N	☐ Y ☐ N
Velocity = 12 _____	☐ Y ☐ N	☐ Y ☐ N
Distance = 250 _____	☐ Y ☐ N	☐ Y ☐ N
Acceleration = 3.2 _____	☐ Y ☐ N	☐ Y ☐ N

Result — write the unit	Can it change direction?	Is it a vector?
Momentum* = 36 _____	☐ Y ☐ N	☐ Y ☐ N
Time = 8.0 _____	☐ Y ☐ N	☐ Y ☐ N
Displacement = 15 _____	☐ Y ☐ N	☐ Y ☐ N
Energy = 500 _____	☐ Y ☐ N	☐ Y ☐ N
Moment* = 24 _____	☐ Y ☐ N	☐ Y ☐ N