

# Physics 2019-2020

Answers for First Benchmark Test

For Q18: Identify each quantity as being a scalar quantity or a vector quantity.

**Some Scalar Quantities**

Length  
Area  
Volume  
Mass  
Density  
Pressure  
Energy  
Entropy  
Work,  
Power

**Some Vector Quantities**

Displacement  
Velocity  
Acceleration  
Momentum  
Force  
Lift  
Drag  
Thrust  
Weight

For Q19: Explain the difference between a scalar quantity and a vector quantity.

A scalar quantity is a quantity that is described by a magnitude but not a direction. A vector quantity requires both a magnitude and a direction. For example, mass is a scalar quantity, as the mass of an object does not change if the reference frame is changed. Velocity, however, is a vector quantity. The velocity of an object depends not only on the speed of the object, but also the direction in which it is moving. An object with a positive velocity in one frame may have a negative velocity in a different frame.

Question ▲	Correct
Q1	A
Q2	A
Q3	30
Q4	10
Q5	B
Q6	B
Q7	D
Q8	B
Q9	B
Q10	D

Question	Correct
9	B
10	D
11	A
12	C
13	A
14	D
15	C

Question	Correct
16	B
17	A
18	
19	
20	B