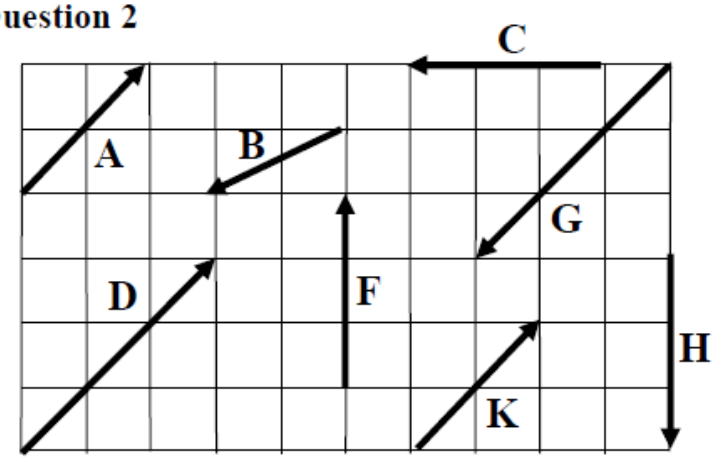
GENERAL PHYSICS I – Question Bank 3

Subject: Scalars and Vectors

Question 1

Give some examples of **instruments** for measuring scalar quantities.

Question 2



Use the table above to answer the following questions;

a) Which vectors are in the same direction?

b) Which vectors are in the opposite direction?

c) Which vectors are 'negative vectors'?

d) Which vectors are 'equal vectors'?

e) Draw **A + B**

f) Draw **F + H**

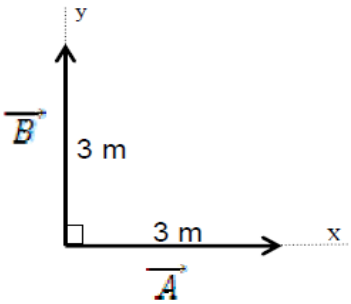
g) Draw **D - F**

h) Draw **C + H + K**

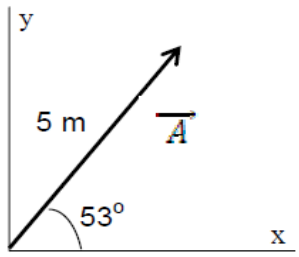
i) Draw **D + B + A** – C

Question 3

a) Find the **magnitude** and **direction** of the resultant(R) of $\overrightarrow{A} + \overrightarrow{B}$ of the vectors below.



b) Find the components of the vector **A** below.



Question 4 A bus travels *40 km in a direction 60° north of east.*
a) What is the north component of the displacement?
b) What is the east component of the displacement?

Question 5. For the below vectors, find the followings:

$\vec{A} = 5i + 4j - 2k$

$\vec{B} = 4j - 4k$

1. $\vec{A} + \vec{B}$

2. $\vec{A} + 2\vec{B}$

3. $\vec{A} - \vec{B}$

4. $\vec{B} - \vec{A}$

5. $\vec{A} - 3\vec{B}$

Question 6. For the below vectors, find the followings:

$\vec{C} = 4j + 3k$

$\vec{D} = 2i - j - 4k$

1. $3\vec{C}$

2. $\vec{C}.\vec{D}$

3. The angle between $\vec{C}$ *and* $\vec{D}$