Homwork (2)

Q1) Two vector A and B lie in the XY plane are given by A=(2.0i+2.0j) m and B=(2.0i-4.0j) m.

(1) Find the sum of A and B expressed in terms of unit vectors.

(2) Find the x and y component of the sum.

(3) Find the magnitude R and direction θ of thesum.

**Q2) Solve the following Problem.**

1) For a=2i-3j+4k , b=5i+2j+6k

find a.b and cosθ.

2) For a=-5i+3j-6k , b=2i-2j+3k

find a.b and cosθ.

3) For a=7i-j+3k , b=i+3j-4k

find a.b and cosθ.

4) For a=2i+3j+5k , b=4i+2j-3k

find a.b and cosθ.

**Q3) Solve the following Problems:**

A) Problem (2) page 368

B) Problem (3) page368

C) Problem (4) page 368

D) Problem (9) page 368

E) Problem (41) page 370

**Q4) Describe scalar and vector quantities and give examples.**

**Q5) Sort these quantities into scalars and vectors:**

Speed- velocity- acceleration- force- power- volume-displacement- pressure- mass-weight

|  |  |
| --- | --- |
| **scalars** | **vectors** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |