vectors $r_{1} = a_{1}i - b_{2}j + c_{3}k$, $r_{2} = a_{1}i + b_{2}j - c_{3}k$, is zero
They are parallel

[MTH303] Which of the following is true of the projection of two vectors X and Y?
The projection of X on Y equal the scalar product of X.y where y is a unit vector in the direction of Y

[MTH303] Find the symmetric form of the equation of a straight line which passes through two given points X and Y having position vectors x and y with respect to an origin O.
r=mx+ny/(m+n)

[MTH303] Given a vector X and scalars s and t, then the law of vector algebra which states that s(tX)=(st)X is called
Associative Law for Multiplication

[MTH303] An aircraft travels 6km due south, then 10km in the direction 60 degree South of west. What is the resultant displacement
15.49Km

[MTH303] An automobile travels 10m northwest, then changing direction and travel 20m 30 degree north of east and finally travels 35m due south. What is the resultant displacement of the automobile?
20.5m, 60 degree south of East.

[MTH303] Determine the value of x so that T = 2i + 3j + k and S = 4i +xj - 2k are perpendicular
-2

[MTH303] Find f at the point (-2,3,5,-6) for a scalar field defined by $f(r,s,t,q)= 6rs-10qt - 50ln(qr)-log_{ts}1$
139.75

[MTH303] If $r_{1} = 2i - j + k$, $r_{2} = i + 3j - 2k$, $r_{3} = -2i+j-3k$ and $r_{4}= 3i+ 2j +5k$, find scalars x,y,z such that $r_{4} - xr_{1} = yr_{2} + zr_{3}$
-2,1,-3

[MTH303] Which of the following pair comprises both scalar and vector quantity in that order?
Specific heat, displacement