

Latex Assignment14

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1 Ex 11.12.2

1. Find the distance between the following pairs of points:
 - (i) $(2, 3, 5)$ and $(4, 3, 1)$
 - (ii) $(-3, 7, 2)$ and $(2, 4, -1)$
 - (iii) $(-1, 3, -4)$ and $(1, -3, 4)$
 - (iv) $(2, -1, 3)$ and $(-2, 1, 3)$
2. Show that the points $(-2, 3, 5)$, $(1, 2, 3)$ and $(7, 0, -1)$ are collinear.
3. Verify the following:
 - (i) $(0, 7, -10)$, $(1, 6, -6)$ and $(4, 9, -6)$ are the vertices of an isosceles triangle.
 - (ii) $(0, 7, 10)$, $(-1, 6, 6)$ and $(-4, 9, 6)$ are the vertices of a right angled triangle.
 - (iii) $(-1, 2, 1)$, $(1, -2, 5)$, $(4, -7, 8)$ and $(2, -3, 4)$ are the vertices of a parallelogram.
4. Find the equation of the set of points which are equidistant from the points $(1, 2, 3)$ and $(3, 2, -1)$.
5. Find the equation of the set of points P , the sum of whose distances from $A(4, 0, 0)$ and $B(-4, 0, 0)$ is equal to 10.