

Worksheet: Introduction to Three Dimensional Geometry

ISC · Class 11 · Mathematics · 8 questions · 25 marks

Name: _____

Date: _____

Score: _____ / 25

Q1. A point has coordinates $(0, -5, 3)$. Which coordinate plane does it lie in, and which octant would a point with all three coordinates negated from this one lie in? *[2 marks]*

Q2. Name the octant in which the point $(-2, 5, -8)$ lies. *[2 marks]*

Q3. Find the midpoint of the segment joining $(2, -3, 6)$ and $(-4, 5, 0)$. *[2 marks]*

Q4. Find the distance between the points $A(1, 2, 3)$ and $B(4, 6, 3)$. *[3 marks]*

Q5. Show that the points $(2, -1, 3)$, $(5, -5, 12)$, and $(-1, 3, -6)$ are collinear. *[4 marks]*

Q6. Two vertices of a triangle are $(3, -2, 4)$ and $(-1, 6, 0)$, and its centroid is $(2, 1, 3)$. Find the third vertex. *[4 marks]*

Q7. Find the distance of the point $(3, -4, 5)$ from the origin. *[3 marks]*

Q8. Show that the points $A(1, 2, 3)$, $B(-1, -2, -1)$, and $C(2, 3, 2)$ form a right-angled triangle by computing all three side lengths. *[5 marks]*
