

3-dimensional geometry

Calculate the midpoints between the two points using the formula:

$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}, \frac{z_1 + z_2}{2} \right)$$

Give your answer to **1 decimal place** if necessary

1. $(0,0,0)$ and $(3,4,12)$

2. $(4,-3,6)$ and $(1,0,17)$

3. $(6,5,4)$ and $(10,9,8)$

4. $(1,1,1)$ and $(10,10,10)$

5. $(-4,-5,-19)$ and $(8,3,12)$

6. $(5,5,18)$ and $(5,5,-8)$

7. $(3,6,1)$ and $(1,6,3)$

8. $(9,6,3)$ and $(-9,-6,-3)$