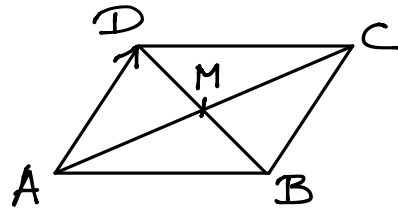


Ex 3.2

$$c) A(7;0) \quad \vec{AD} = \begin{pmatrix} -9 \\ -1 \end{pmatrix} \quad M(-1;1)$$

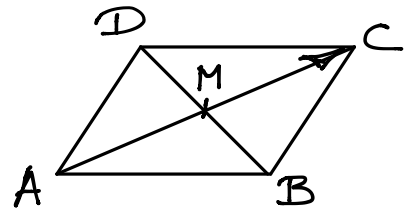


$$1) \quad \vec{OC} = \vec{OA} + 2\vec{AM} \\ = \begin{pmatrix} 7 \\ 0 \end{pmatrix} + 2\begin{pmatrix} -1-7 \\ 1-0 \end{pmatrix} = \begin{pmatrix} -9 \\ 2 \end{pmatrix} \Rightarrow \underline{\underline{C(-9;2)}}$$

$$2) \quad \vec{AD} = \vec{BC} \Leftrightarrow \vec{AD} = \vec{OC} - \vec{OB} \\ \Leftrightarrow \vec{OB} = \vec{OC} - \vec{AD} = \begin{pmatrix} -9 \\ 2 \end{pmatrix} - \begin{pmatrix} -9 \\ -1 \end{pmatrix} = \begin{pmatrix} 0 \\ 3 \end{pmatrix} \Rightarrow \underline{\underline{B(0;3)}}$$

$$3) \quad \vec{AD} = \vec{OD} - \vec{OA} \Leftrightarrow \vec{OD} = \vec{AD} + \vec{OA} = \begin{pmatrix} -9 \\ -1 \end{pmatrix} + \begin{pmatrix} 7 \\ 0 \end{pmatrix} = \begin{pmatrix} -2 \\ -1 \end{pmatrix} \\ \Rightarrow \underline{\underline{D(-2;-1)}}$$

$$d) B(-7;3) \quad M(-2;-1) \quad \vec{AC} = \begin{pmatrix} -6 \\ -8 \end{pmatrix}$$



$$1) \quad \vec{AM} = \frac{1}{2}\vec{AC} \\ \Leftrightarrow \vec{OM} - \vec{OA} = \frac{1}{2}\vec{AC}$$

$$\Leftrightarrow \vec{OM} - \frac{1}{2}\vec{AC} = \vec{OA}$$

$$\Leftrightarrow \vec{OA} = \begin{pmatrix} -2 \\ -1 \end{pmatrix} - \frac{1}{2}\begin{pmatrix} -6 \\ -8 \end{pmatrix} = \begin{pmatrix} -2+3 \\ -1+4 \end{pmatrix} = \begin{pmatrix} 1 \\ 3 \end{pmatrix} \Leftrightarrow \underline{\underline{A(1;3)}}$$

$$2) \quad \vec{BD} = 2\vec{BM} \Leftrightarrow \vec{OD} - \vec{OB} = 2\vec{BM}$$

$$\Leftrightarrow \vec{OD} = 2\vec{BM} + \vec{OB}$$

$$= 2\begin{pmatrix} -2+7 \\ -1-3 \end{pmatrix} + \begin{pmatrix} -7 \\ 3 \end{pmatrix}$$

$$= \begin{pmatrix} 10-7 \\ -8+3 \end{pmatrix} = \begin{pmatrix} 3 \\ -5 \end{pmatrix} \Rightarrow \underline{\underline{D(3;-5)}}$$

$$3) \quad \vec{AC} = \vec{OC} - \vec{OA} \Leftrightarrow \vec{OC} = \vec{OA} + \vec{AC}$$

$$= \begin{pmatrix} 1 \\ 3 \end{pmatrix} + \begin{pmatrix} -6 \\ -8 \end{pmatrix} = \begin{pmatrix} -5 \\ -5 \end{pmatrix} \Rightarrow \underline{\underline{C(-5;-5)}}$$