10.6
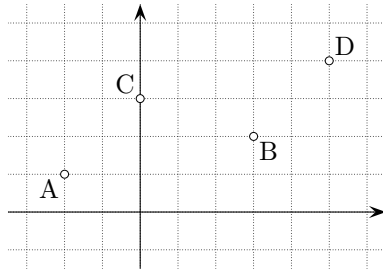

1) $\overrightarrow{AB} = \begin{pmatrix} 3 - (-2) \\ 2 - 1 \end{pmatrix} = \begin{pmatrix} 5 \\ 1 \end{pmatrix}$

$\overrightarrow{AC} = \begin{pmatrix} 0 - (-2) \\ 3 - 1 \end{pmatrix} = \begin{pmatrix} 2 \\ 2 \end{pmatrix}$

$\overrightarrow{AD} = \overrightarrow{AB} + \overrightarrow{AC} = \begin{pmatrix} 5 \\ 1 \end{pmatrix} + \begin{pmatrix} 2 \\ 2 \end{pmatrix} = \begin{pmatrix} 7 \\ 3 \end{pmatrix}$

2) Posons $D(d_1 \, ; d_2)$ les coordonnées du point D.

$\begin{pmatrix} 7 \\ 3 \end{pmatrix} = \overrightarrow{AD} = \begin{pmatrix} d_1 - (-2) \\ d_2 - 1 \end{pmatrix} = \begin{pmatrix} d_1 + 2 \\ d_2 - 1 \end{pmatrix}$

$\begin{cases} 7 = d_1 + 2 \\ 3 = d_2 - 1 \end{cases} \iff \begin{cases} 5 = d_1 \\ 4 = d_2 \end{cases}$

On a donc trouvé $D(5 \, ; 4)$.