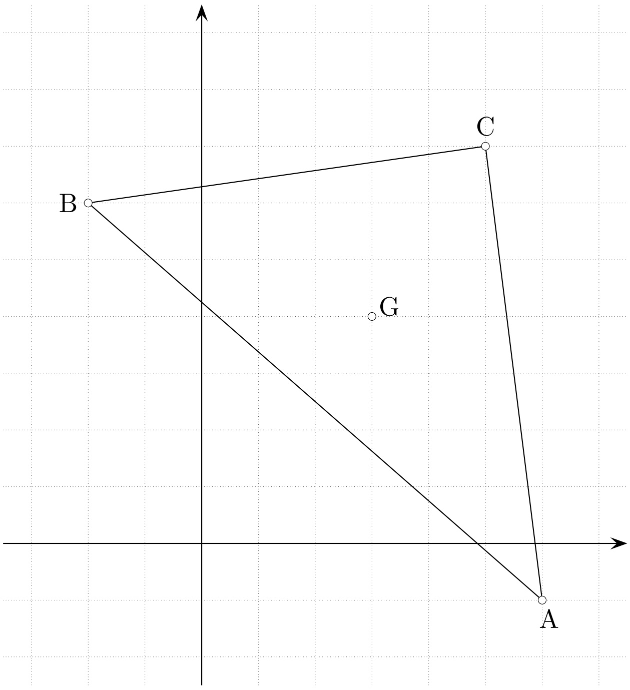
10.18 1)



Posons $C(c_1\,;c_2)$.

On doit avoir $G(3\,;4) = (\frac{6-2+c_1}{3}\,;\frac{-1+6+c_2}{3})$.

$$\begin{cases} 3 = \frac{6-2+c_1}{3} \\ 4 = \frac{-1+6+c_2}{3} \end{cases} \Longleftrightarrow \begin{cases} 9 = 6-2+c_1 \\ 12 = -1+6+c_2 \end{cases} \Longleftrightarrow \begin{cases} 5 = c_1 \\ 7 = c_2 \end{cases}$$

En résumé, $C(5\,;7)$.

2) Posons $C(c_1\,;c_2)$.

On doit avoir $M_{AC}(2\,;2) = (\frac{6+c_1}{2}\,;\frac{-2+c_2}{2})$.

$$\begin{cases} 2 = \frac{6+c_1}{2} \\ 2 = \frac{-2+c_2}{2} \end{cases} \Longleftrightarrow \begin{cases} 4 = 6+c_1 \\ 4 = -2+c_2 \end{cases} \Longleftrightarrow \begin{cases} -2 = c_1 \\ 6 = c_2 \end{cases}$$

On a donc trouvé $C(-2\,;6)$.

Posons $B(b_1\,;b_2)$.

On doit avoir $M_{BC}(3\,;1) = (\frac{b_1-2}{2}\,;\frac{b_2+6}{2})$.

$$\begin{cases} 3 = \frac{b_1-2}{2} \\ 1 = \frac{b_2+6}{2} \end{cases} \Longleftrightarrow \begin{cases} 6 = b_1-2 \\ 2 = b_2+6 \end{cases} \Longleftrightarrow \begin{cases} 8 = b_1 \\ -4 = b_2 \end{cases}$$

On a ainsi obtenu $B(8\,;-4)$.