In the diagram, $O A B C D E$ is a regular hexagon with centre $M$.
Vectors $\mathbf{a}$ and $\mathbf{b}$ are represented by $\overrightarrow{\mathrm{OA}}$ and $\overrightarrow{\mathrm{OB}}$ respectively.

(a) Express $\overrightarrow{\mathrm{AB}}$ in terms of $\mathbf{a}$ and $\mathbf{b}$.
(b) Express $\overrightarrow{\mathrm{OC}}$ in terms of $\mathbf{a}$ and $\mathbf{b}$.

Answers:
(a) $\underline{b}-\underline{a}$ (or equivalent)
(b) $2(\underline{b}-\underline{a})$ or $2 \underline{b}-2 \underline{a}$ (or equivalent)

