Zadatak 6. Dan je četverokut $ABCD$. Točke N, P, Q i R simetrične su danoj točki M u odnosu na polovišta stranica $\overline{AB}$, $\overline{BC}$, $\overline{CD}$ i $\overline{AD}$ četverokuta. Dokaži da su N, P, Q i R vrhovi paralelograma.

Rješenje. $\overrightarrow{MN} = \overrightarrow{MA} + \overrightarrow{MB}$, $\overrightarrow{MP} = \overrightarrow{MB} + \overrightarrow{MC}$, $\overrightarrow{MQ} = \overrightarrow{MC} + \overrightarrow{MD}$, $\overrightarrow{MR} = \overrightarrow{MD} + \overrightarrow{MA}$. Nadalje, $\overrightarrow{NP} = \overrightarrow{NM} + \overrightarrow{MP} = \overrightarrow{MP} - \overrightarrow{MN}$, $\overrightarrow{RQ} = \overrightarrow{RM} + \overrightarrow{MQ} = \overrightarrow{MQ} - \overrightarrow{MR}$. Oduzmemo li posljednje dvije jednakosti, imamo: $\overrightarrow{NP} - \overrightarrow{RQ} = \overrightarrow{MP} - \overrightarrow{MN} - \overrightarrow{MQ} + \overrightarrow{MR} = \overrightarrow{MB} + \overrightarrow{MC} - \overrightarrow{MA} - \overrightarrow{MB} - \overrightarrow{MC} - \overrightarrow{MD} + \overrightarrow{MD} + \overrightarrow{MA} = \vec{0}$. Dakle, $\overrightarrow{NP} = \overrightarrow{RQ}$.