

Έχουμε

$$\begin{aligned}\overrightarrow{KA} - 2\overrightarrow{BM} &= 3\overrightarrow{AB} + \overrightarrow{BA} \xRightarrow{3\overrightarrow{AB}=2\overrightarrow{AB}+\overrightarrow{AB}} \overrightarrow{KA} - 2\overrightarrow{BM} = 2\overrightarrow{AB} + \overrightarrow{AB} + \overrightarrow{BA} \xRightarrow{\overrightarrow{AB}+\overrightarrow{BA}=\overrightarrow{AA}} \overrightarrow{KA} = 2\overrightarrow{AB} + \overrightarrow{AA} + 2\overrightarrow{BM} \Rightarrow \\ \Rightarrow \overrightarrow{KA} - \overrightarrow{AA} &= 2(\overrightarrow{AB} + \overrightarrow{BM}) \xRightarrow{\overrightarrow{AB}+\overrightarrow{BM}=\overrightarrow{AM}} \overrightarrow{KA} + \overrightarrow{AA} = 2\overrightarrow{AM} \xRightarrow{\overrightarrow{KA}+\overrightarrow{AA}=\overrightarrow{KA}} \overrightarrow{KA} = 2\overrightarrow{AM} \Rightarrow \overrightarrow{KA} // \overrightarrow{AM}\end{aligned}$$

οπότε τα σημεία K, A και M είναι συνευθειακά