北京景山学校 Name:	Grade : /100
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http://beijingshanmaths.org	Assignment # 6 => Dec. $5 - p.1/1$

Problem (VSOP*) :** Let ABC be a normal triangle, B' the middle of AC and C' the middle of AB. We want to place 3 special points on this triangle and prove that they are on the same line.



- 1. Determine and place the point I defined by the vector equation : $2\overrightarrow{IC'} + \overrightarrow{IB'} = \overrightarrow{O}$
- 2. Determine and place the point D defined by the vector equation : $3\overrightarrow{DA} + 2\overrightarrow{DB} = \overrightarrow{O}$
- 3. Determine and place the point E defined by the vector equation : $2\overrightarrow{EB} + \overrightarrow{EC} = \overrightarrow{O}$
- 4. Prove by using a vector equation that the 3 points D, I, E, are on the same line.
- **Reminder** (help !) to prove that the 3 points are on the same line you must prove that they match a vector equation in the form of $\overrightarrow{ID} = x\overrightarrow{IE}$ where x is a real number to be found