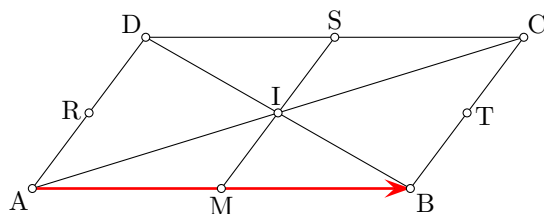
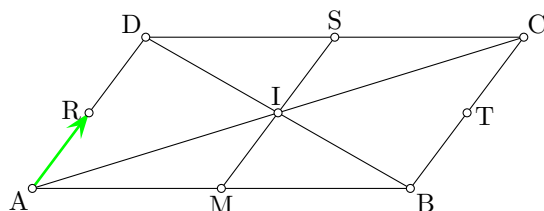


7.2

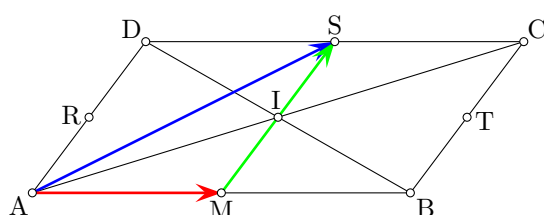
$$\begin{aligned}
 1) \quad (a) \quad \overrightarrow{AB} &= \overrightarrow{AB} \\
 &= 1 \cdot \overrightarrow{AB} + 0 \cdot \overrightarrow{AD} \\
 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix}
 \end{aligned}$$



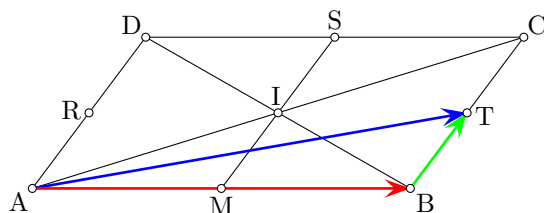
$$\begin{aligned}
 (b) \quad \overrightarrow{AR} &= \frac{1}{2} \overrightarrow{AD} \\
 &= 0 \cdot \overrightarrow{AB} + \frac{1}{2} \cdot \overrightarrow{AD} \\
 &= \begin{pmatrix} 0 \\ \frac{1}{2} \end{pmatrix}
 \end{aligned}$$



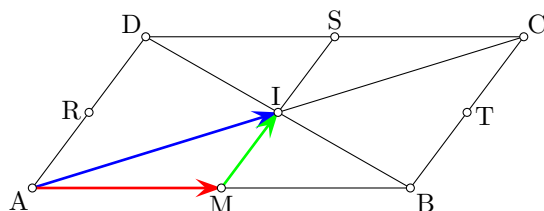
$$\begin{aligned}
 (c) \quad \overrightarrow{AS} &= \overrightarrow{AM} + \overrightarrow{MS} \\
 &= \frac{1}{2} \cdot \overrightarrow{AB} + 1 \cdot \overrightarrow{AD} \\
 &= \begin{pmatrix} \frac{1}{2} \\ 1 \end{pmatrix}
 \end{aligned}$$



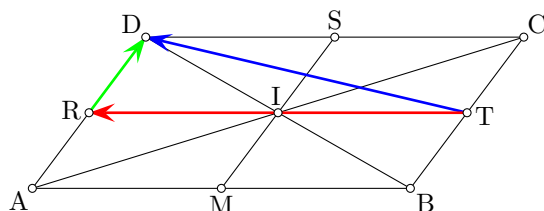
$$\begin{aligned}
 (d) \quad \overrightarrow{AT} &= \overrightarrow{AB} + \overrightarrow{BT} \\
 &= 1 \cdot \overrightarrow{AB} + \frac{1}{2} \cdot \overrightarrow{AD} \\
 &= \begin{pmatrix} 1 \\ \frac{1}{2} \end{pmatrix}
 \end{aligned}$$



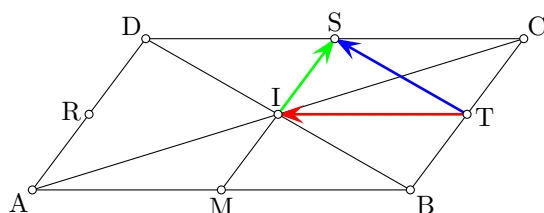
$$\begin{aligned}
 (e) \quad \overrightarrow{AI} &= \overrightarrow{AM} + \overrightarrow{MI} \\
 &= \frac{1}{2} \cdot \overrightarrow{AB} + \frac{1}{2} \cdot \overrightarrow{AD} \\
 &= \begin{pmatrix} \frac{1}{2} \\ \frac{1}{2} \end{pmatrix}
 \end{aligned}$$



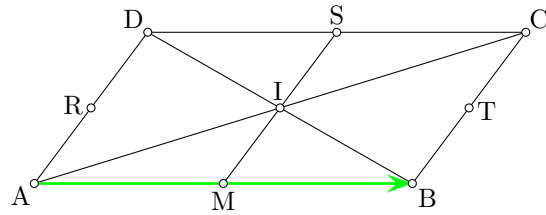
$$\begin{aligned}
 (f) \quad \overrightarrow{TD} &= \overrightarrow{TR} + \overrightarrow{RD} \\
 &= -1 \cdot \overrightarrow{AB} + \frac{1}{2} \cdot \overrightarrow{AD} \\
 &= \begin{pmatrix} -1 \\ \frac{1}{2} \end{pmatrix}
 \end{aligned}$$



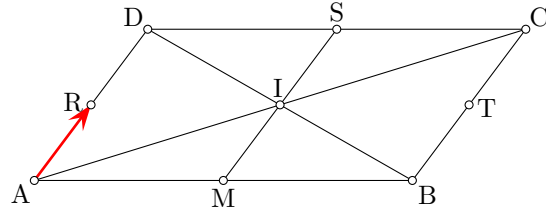
$$\begin{aligned}
 (g) \quad \overrightarrow{TS} &= \overrightarrow{TI} + \overrightarrow{IS} \\
 &= -\frac{1}{2} \cdot \overrightarrow{AB} + \frac{1}{2} \cdot \overrightarrow{AD} \\
 &= \begin{pmatrix} -\frac{1}{2} \\ \frac{1}{2} \end{pmatrix}
 \end{aligned}$$



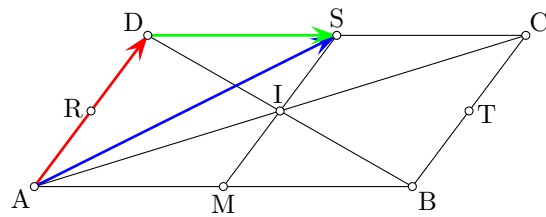
$$\begin{aligned}
 2) \quad (a) \quad \overrightarrow{AB} &= \overrightarrow{AB} \\
 &= 0 \cdot \overrightarrow{AD} + 1 \cdot \overrightarrow{AB} \\
 &= \begin{pmatrix} 0 \\ 1 \end{pmatrix}
 \end{aligned}$$



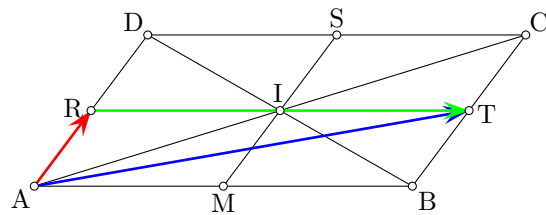
$$\begin{aligned}
 (b) \quad \overrightarrow{AR} &= \frac{1}{2} \overrightarrow{AD} \\
 &= \frac{1}{2} \cdot \overrightarrow{AD} + 0 \cdot \overrightarrow{AB} \\
 &= \begin{pmatrix} \frac{1}{2} \\ 0 \end{pmatrix}
 \end{aligned}$$



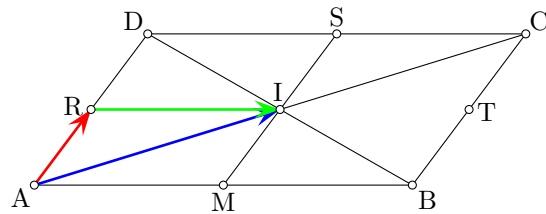
$$\begin{aligned}
 (c) \quad \overrightarrow{AS} &= \overrightarrow{AD} + \overrightarrow{DS} \\
 &= 1 \cdot \overrightarrow{AD} + \frac{1}{2} \cdot \overrightarrow{AB} \\
 &= \begin{pmatrix} 1 \\ \frac{1}{2} \end{pmatrix}
 \end{aligned}$$



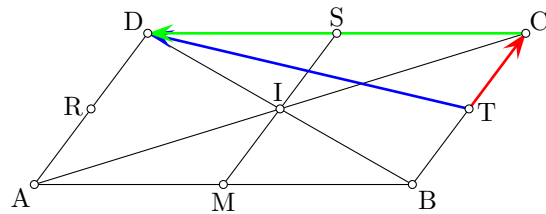
$$\begin{aligned}
 (d) \quad \overrightarrow{AT} &= \overrightarrow{AR} + \overrightarrow{RT} \\
 &= \frac{1}{2} \cdot \overrightarrow{AD} + 1 \cdot \overrightarrow{AB} \\
 &= \begin{pmatrix} \frac{1}{2} \\ 1 \end{pmatrix}
 \end{aligned}$$



$$\begin{aligned}
 (e) \quad \overrightarrow{AI} &= \overrightarrow{AR} + \overrightarrow{RI} \\
 &= \frac{1}{2} \cdot \overrightarrow{AD} + \frac{1}{2} \cdot \overrightarrow{AB} \\
 &= \begin{pmatrix} \frac{1}{2} \\ \frac{1}{2} \end{pmatrix}
 \end{aligned}$$



$$\begin{aligned}
 (f) \quad \overrightarrow{TD} &= \overrightarrow{TC} + \overrightarrow{CD} \\
 &= \frac{1}{2} \cdot \overrightarrow{AD} - 1 \cdot \overrightarrow{AB} \\
 &= \begin{pmatrix} \frac{1}{2} \\ -1 \end{pmatrix}
 \end{aligned}$$



$$\begin{aligned}
 (g) \quad \overrightarrow{TS} &= \overrightarrow{TC} + \overrightarrow{CS} \\
 &= \frac{1}{2} \cdot \overrightarrow{AD} - \frac{1}{2} \cdot \overrightarrow{AB} \\
 &= \begin{pmatrix} \frac{1}{2} \\ -\frac{1}{2} \end{pmatrix}
 \end{aligned}$$

