

4.35 1)

$$\vec{\alpha} // \vec{\beta} \Leftrightarrow \det(\vec{\alpha}, \vec{\beta}) = 0 \Leftrightarrow \begin{vmatrix} 2 & -5 \\ x & 10 \end{vmatrix} = 0 \Leftrightarrow 2 \cdot 10 - (-5) \cdot x = 0 \Leftrightarrow 5x = -20 \Leftrightarrow x = -4$$

4.35 2)

$$\vec{\alpha} // \vec{\beta} \Rightarrow \det(\vec{\alpha}, \vec{\beta}) = 0 \Rightarrow \begin{vmatrix} 3 & x \\ 1 & 2 \end{vmatrix} = 0 \Rightarrow 6 - x = 0 \Rightarrow x = 6$$

4.35 3)

$$\vec{\alpha} // \vec{\beta} \Rightarrow \det(\vec{\alpha}, \vec{\beta}) = 0 \Rightarrow \begin{vmatrix} 4 & -1 \\ x & 4 \end{vmatrix} = 0 \Rightarrow 16 + x = 0 \Rightarrow x = -16$$

4.35 4)

$$\vec{\alpha} // \vec{\beta} \Rightarrow \det(\vec{\alpha}, \vec{\beta}) = 0 \Rightarrow \begin{vmatrix} 15 & 6 \\ 5 & x \end{vmatrix} = 0 \Rightarrow 15x = 30 \Rightarrow x = 2$$