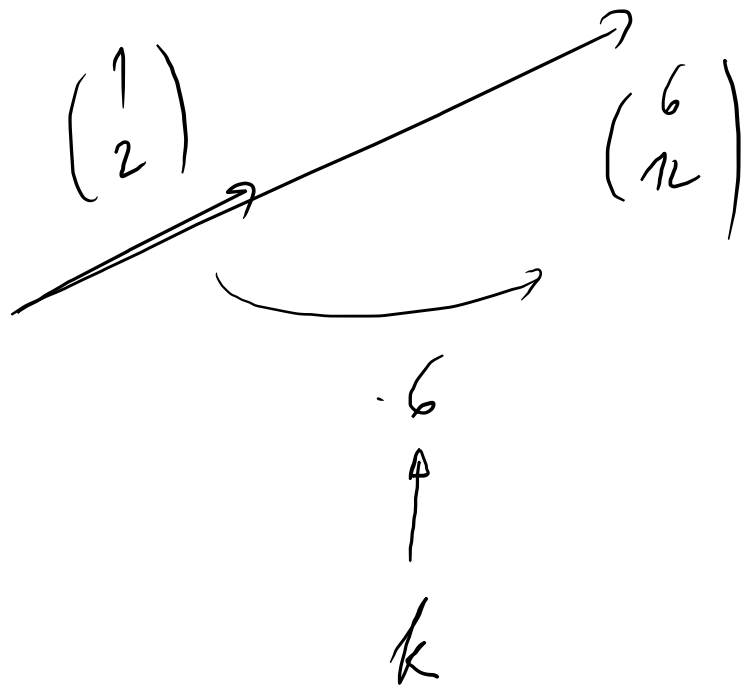


$$\begin{array}{l} (x-1) \\ (x-1) \end{array} \frac{1}{x} + \frac{(x+1) \cdot x}{(x-1) \cdot x} = \frac{1(x-1) + x(x+1)}{x(x-1)}$$

$$\frac{a}{b} + \frac{c}{d} = \frac{ad+bc}{bd}$$

$$\begin{array}{l} 3 \cdot \\ 3 \cdot \end{array} \frac{3}{4} + \frac{5 \cdot 2}{6 \cdot 2} = \frac{18 + 20}{24}$$



$$\begin{pmatrix} 1 \\ 3 \end{pmatrix} \stackrel{?}{=} k \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

Vu que

$$1 = k \cdot 0 = 0 \quad \& \quad 3 = k \cdot (-1) \Rightarrow k = -3$$

k n'existe pas

$\Rightarrow \begin{pmatrix} 1 \\ 3 \end{pmatrix}$ et $\begin{pmatrix} 0 \\ -1 \end{pmatrix}$ ne sont pas colinéaires

$$x^5 + 3x^4 - 16x - 48$$

x^5	1	3	0	0	-16	-48	
	2	2	10	20	40	48	
	<hr/>						
	1	5	10	20	24	0	
x^4							R

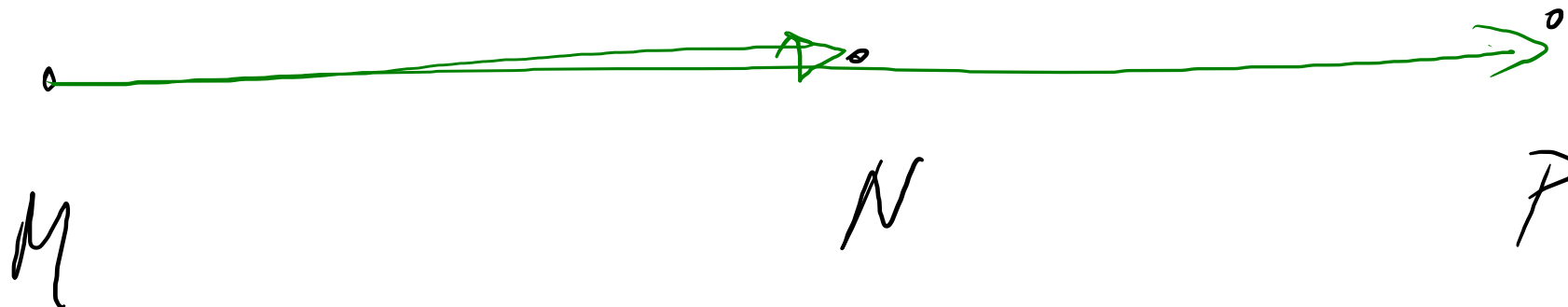
$$(x-2)(x^4 + 5x^3 + 10x^2 + 20x + 24)$$

$$\begin{vmatrix} \begin{pmatrix} a \\ b \end{pmatrix} & \begin{pmatrix} c \\ d \end{pmatrix} \end{vmatrix} = ad - bc = 0$$

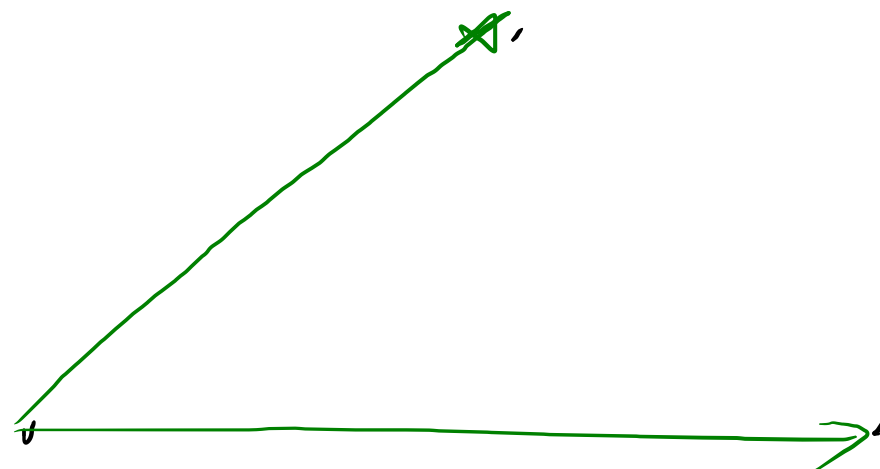
$\Rightarrow \begin{pmatrix} a \\ b \end{pmatrix}$ et $\begin{pmatrix} c \\ d \end{pmatrix}$ colinéaires

$$\begin{pmatrix} 1 \\ 3 \end{pmatrix} = k \begin{pmatrix} \frac{1}{9} \\ \frac{1}{3} \end{pmatrix} \Leftrightarrow \begin{cases} 1 = k \cdot \frac{1}{9} \\ 3 = k \cdot \frac{1}{3} \end{cases} \Leftrightarrow \begin{cases} k = 9 \\ k = 9 \end{cases}$$

\Rightarrow colineares



$$\vec{MN} = k \vec{MP}$$



$$x^4 + 2x^3 - 4x^2 - 5x - 6$$

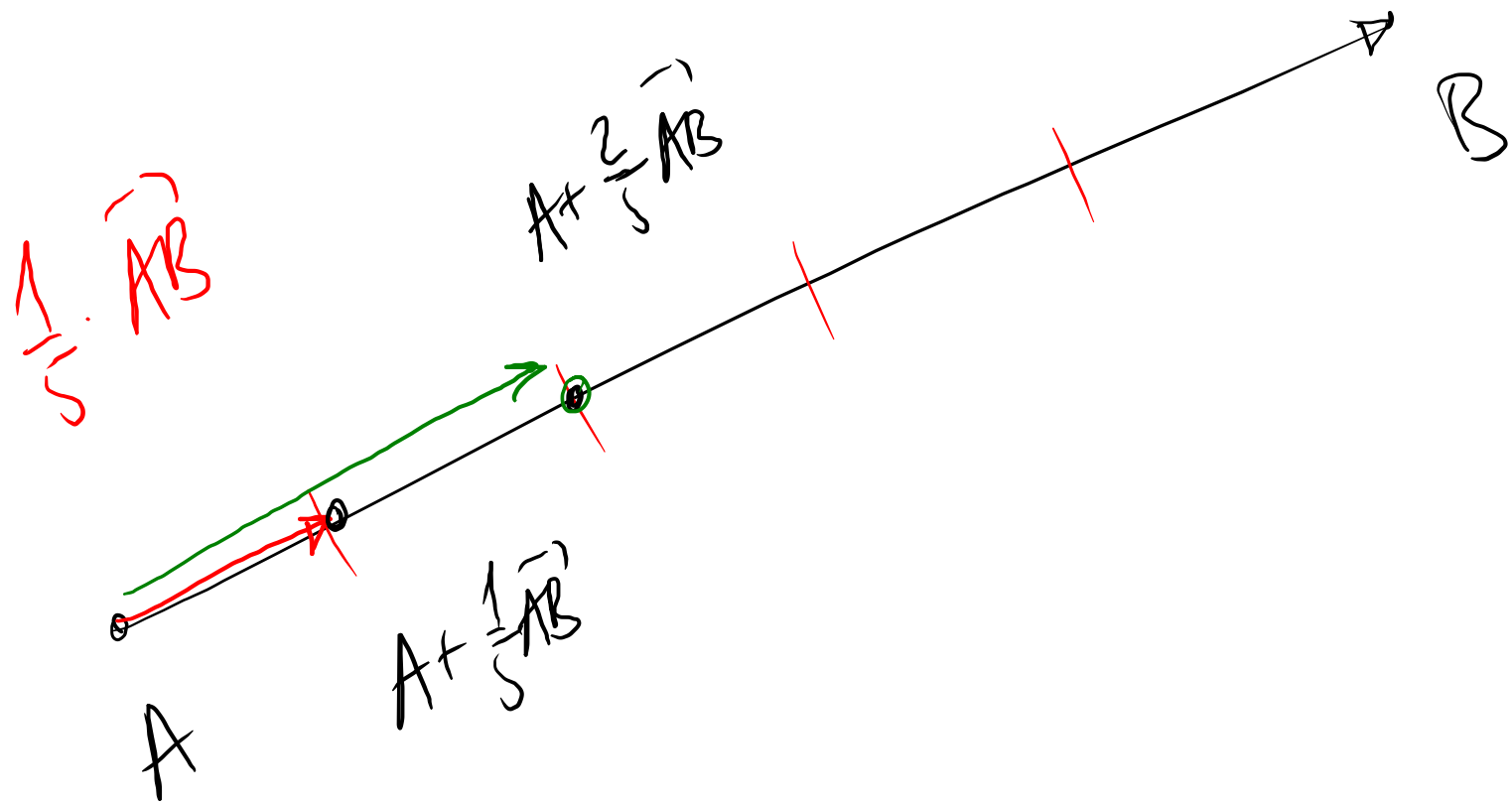
$$D_{-6} : \pm 1; \pm 2; \pm 3; \pm 6$$

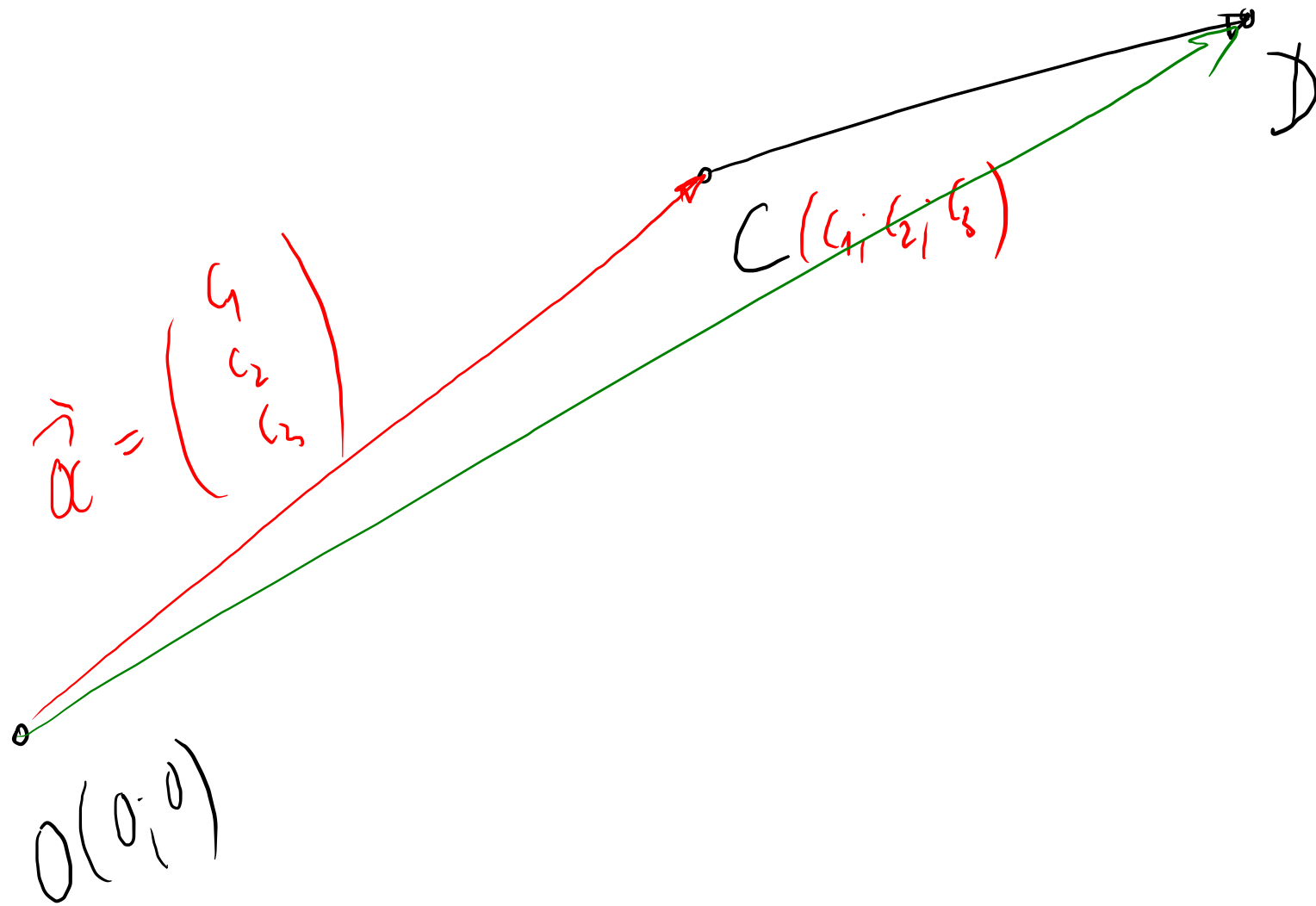
x^4	1	2	-4	-5	-6
2	2	8	8	6	
	1	4	4	3	0

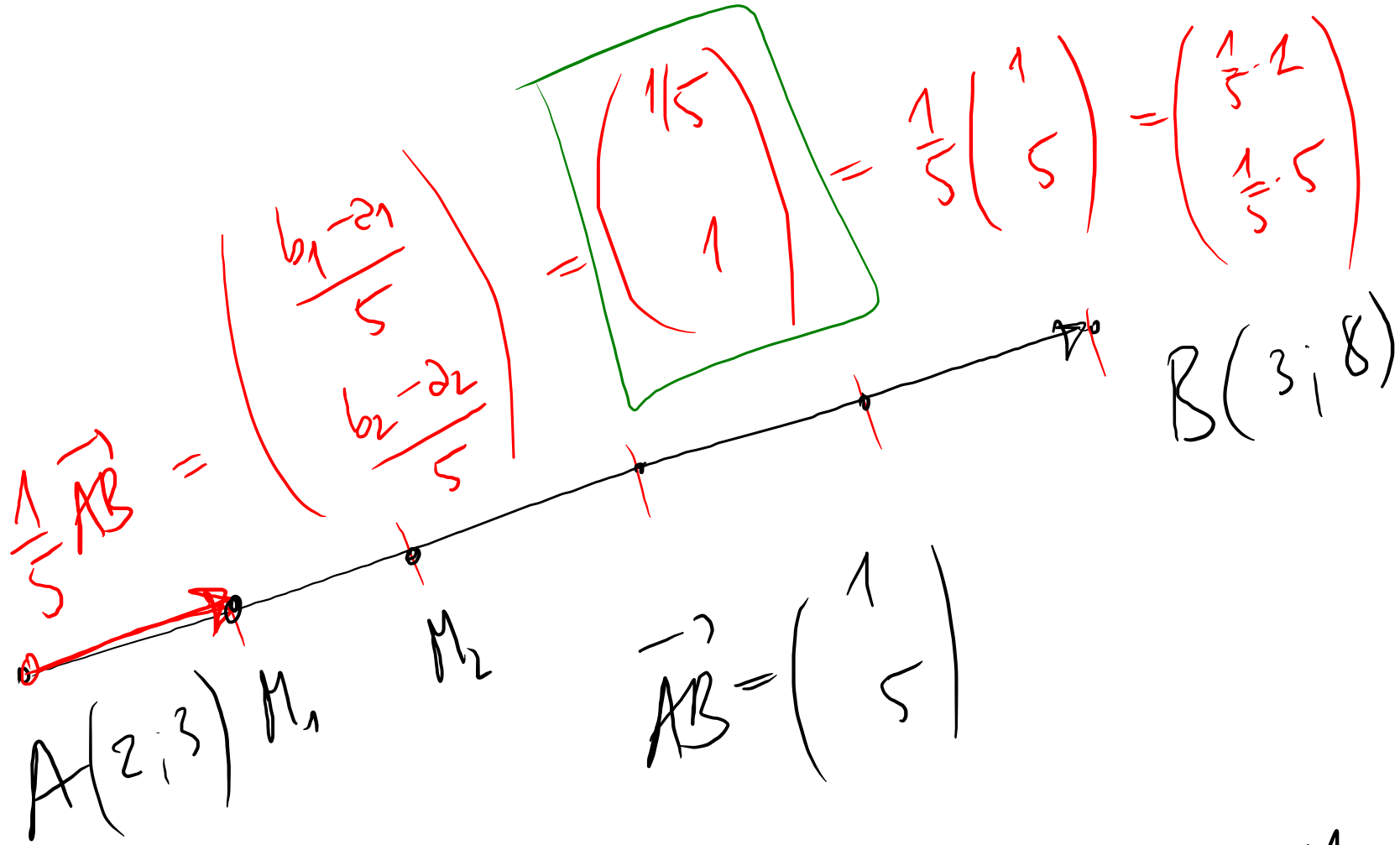
$$(x-2) (x^3 + 4x^2 + 4x + 3)$$

$$(x-2) (x+3) (x^2 + x + 1)$$

	1	4	4	3
-3		-3	-3	-3
	1	1	1	0







$$\vec{AB} = \begin{pmatrix} b_1 - a_1 \\ b_2 - a_2 \end{pmatrix}$$

$$M_1 = A + \frac{1}{5} \vec{AB}$$

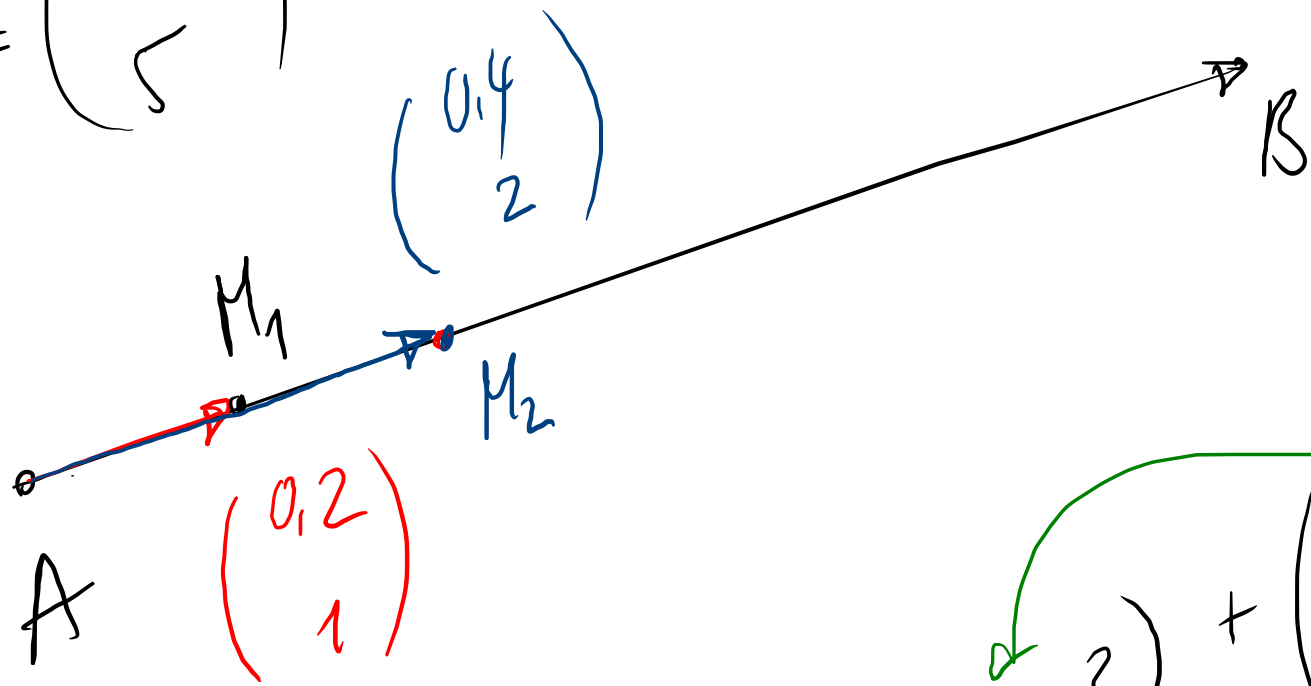
$$= \begin{pmatrix} 2 \\ 3 \end{pmatrix} + \begin{pmatrix} 1/5 \\ 1 \end{pmatrix}$$

$$= \begin{pmatrix} 11/5 \\ 4 \end{pmatrix}$$

$$M_2 = A + \frac{2}{5} \vec{AB}$$

$$\vec{AB} = \begin{pmatrix} 3-2 \\ 8-3 \end{pmatrix}$$

$$= \begin{pmatrix} 1 \\ 5 \end{pmatrix}$$



$$A + \frac{1}{5} \vec{AB} = M_1 = \begin{pmatrix} 2 \\ 3 \end{pmatrix} + \begin{pmatrix} 0.2 \\ 1 \end{pmatrix} = \begin{pmatrix} 2.2 \\ 4 \end{pmatrix}$$

$$x^5 + 3x^4 - 16x - 48$$

$$1 \quad 3 \quad 0 \quad 0 \quad -16 \quad -48$$

$$2 \quad \quad 2 \quad 10 \quad 20 \quad 40 \quad 48$$

$$1 \quad 5 \quad 10 \quad 20 \quad 24 \quad 0$$

$$(x-2)(x+2)(x+3)(x^2+4)$$

$$1 \quad 5 \quad 10 \quad 20 \quad 24$$

$$-2 \quad \quad -2 \quad -6 \quad -8 \quad -24$$

$$1 \quad 3 \quad 4 \quad 12 \quad 0$$

$$1 \quad 3 \quad 4 \quad 12$$

$$-3 \quad \quad -3 \quad 0 \quad -12$$

$$1 \quad 0 \quad 4 \quad 0$$

$$\begin{vmatrix} 1 & \frac{1}{9} \\ 3 & \frac{1}{3} \end{vmatrix} = 1 \cdot \frac{1}{3} - 3 \cdot \frac{1}{9} = \frac{1}{3} - \frac{1}{3} = \frac{1}{3} - \frac{3}{9} = \frac{1}{3} - \frac{1}{3} = 0$$

$$x^3 + 9x^2 + 11x - 21$$

$$1 \quad 9 \quad 11 \quad -21$$

$$1 \quad 10 \quad 21$$

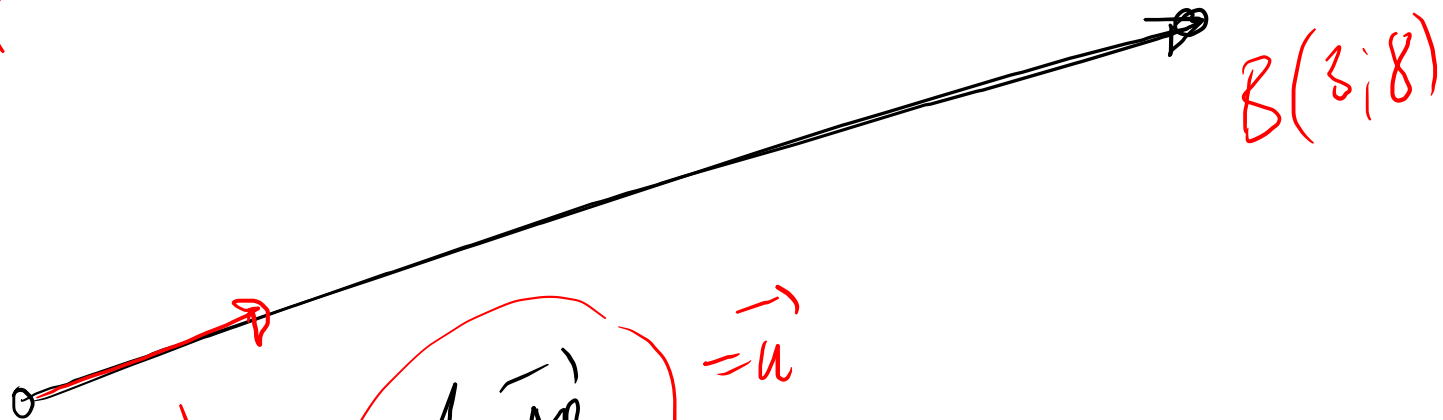
$$1 \quad 10 \quad 21 \quad 0$$

$$x^3 + 9x^2 + 11x - 21 = (x-1)(x^2 + 10x + 21)$$

$$= (x-1)(x+3)(x+7)$$

$$1 \quad -3 \quad -7$$

$A + \vec{u}$



$A(2;3)$

$$\begin{pmatrix} 1 \\ 5 \end{pmatrix} \vec{u}$$

\vec{u}

$$\vec{AB} = \begin{pmatrix} 1 \\ 5 \end{pmatrix}$$

$B(3;8)$