

ベクトルが等しいとは

$$\vec{a} = (\star, \blacktriangle) \text{ と}$$

$$\vec{b} = (\bullet, \blacksquare) \text{ が等しいときは}$$

$\star = \bullet, \blacktriangle = \blacksquare$ です。(当然だ)

$\vec{a} = (x-5, y+9), \vec{b} = (-3, 1)$ が等しいとき x, y ?

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$$x - 5 = -3$$

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$$x - 5 = -3$$

$$x = -3 + 5$$

$$x = 2 \quad \text{ⓐ}$$

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$$y + 9 = 1$$

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$$x = 2 \quad \text{ⓐ}$$

$\vec{a} = (x-5, y+9), \vec{b} = (-3, 1)$ が等しいとき x, y ?

$$x - 5 = -3$$

$$y + 9 = 1$$

$$x = -3 + 5$$

$$y = 1 - 9$$

$$x = 2 \quad \text{答}$$

$$y = -8 \quad \text{答}$$

まとめると $\text{答 } x = 2, y = -8$

$\vec{a} = (2x+3y, 3x-4y), \vec{b} = (1, 10)$ が等しいとき x, y ?

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$$\begin{cases} 2x + 3y = 1 \\ 3x - 4y = 10 \end{cases}$$

x を消去する場合は 2 と 3 の
最小公倍数 6 に揃えるために

$\vec{a} = (2x+3y, 3x-4y), \vec{b} = (1, 10)$ が等しいとき x, y ?

$$3 \times (2x + 3y) = 1 \times 3$$

$$2 \times (3x - 4y) = 10 \times 2$$

互いの式に **3** と **2** をかけ算する。

$\vec{a} = (2x+3y, 3x-4y), \vec{b} = (1, 10)$ が等しいとき x, y ?

$$3 \times (2x + 3y) = 1 \times 3 \quad 6x + 9y = 3$$

$$2 \times (3x - 4y) = 10 \times 2 \quad 6x - 8y = 20$$

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式をひき算すると x が消えるので

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$$17y = -17$$

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$$y = -1 \text{ (答)}$$

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でも OK

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$$\text{答 } x = 2, y = -1$$