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## 9. Vector operations sketching practice

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Lecture due Aug 18, 2021 20:30 IST   Completed



Practice

Sketch the vectors: addition

1.0/1 point (graded)

Let

$\vec{v} = \langle 2, -1 \rangle,$

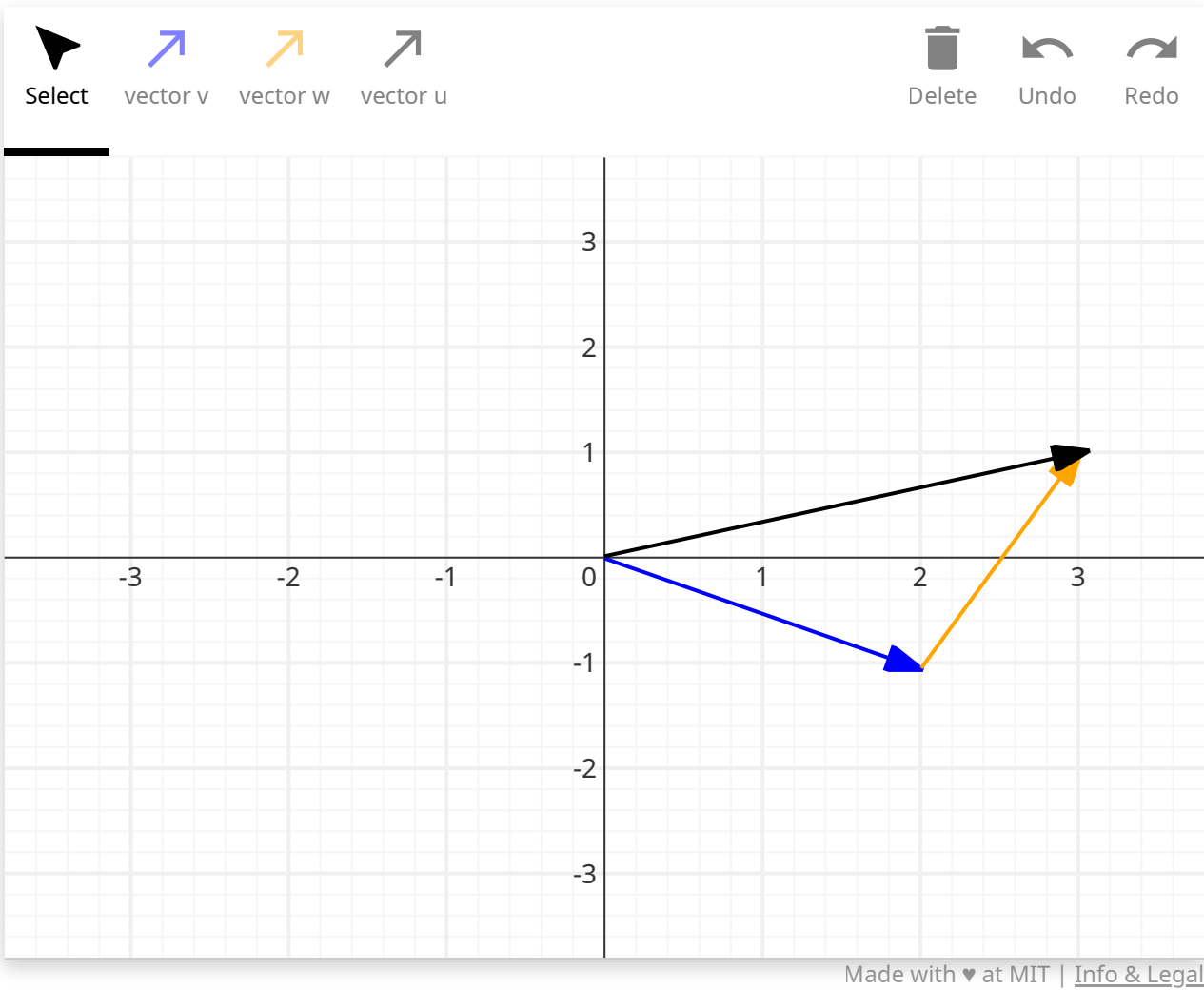
$\vec{w} = \langle 1, 2 \rangle,$

and

$\vec{u} = \vec{v} + \vec{w}.$

Sketch the vector  $\vec{v}$  in blue, the vector  $\vec{w}$  in orange, and the vector  $\vec{u}$  in black.

You can move a drawn arrow around the page using the select button an clicking on the arrow to drag it around the canvas. To edit a drawn arrow, click select and then click and drag either the start or end point of the vector.



Answer: See solution.

Well done

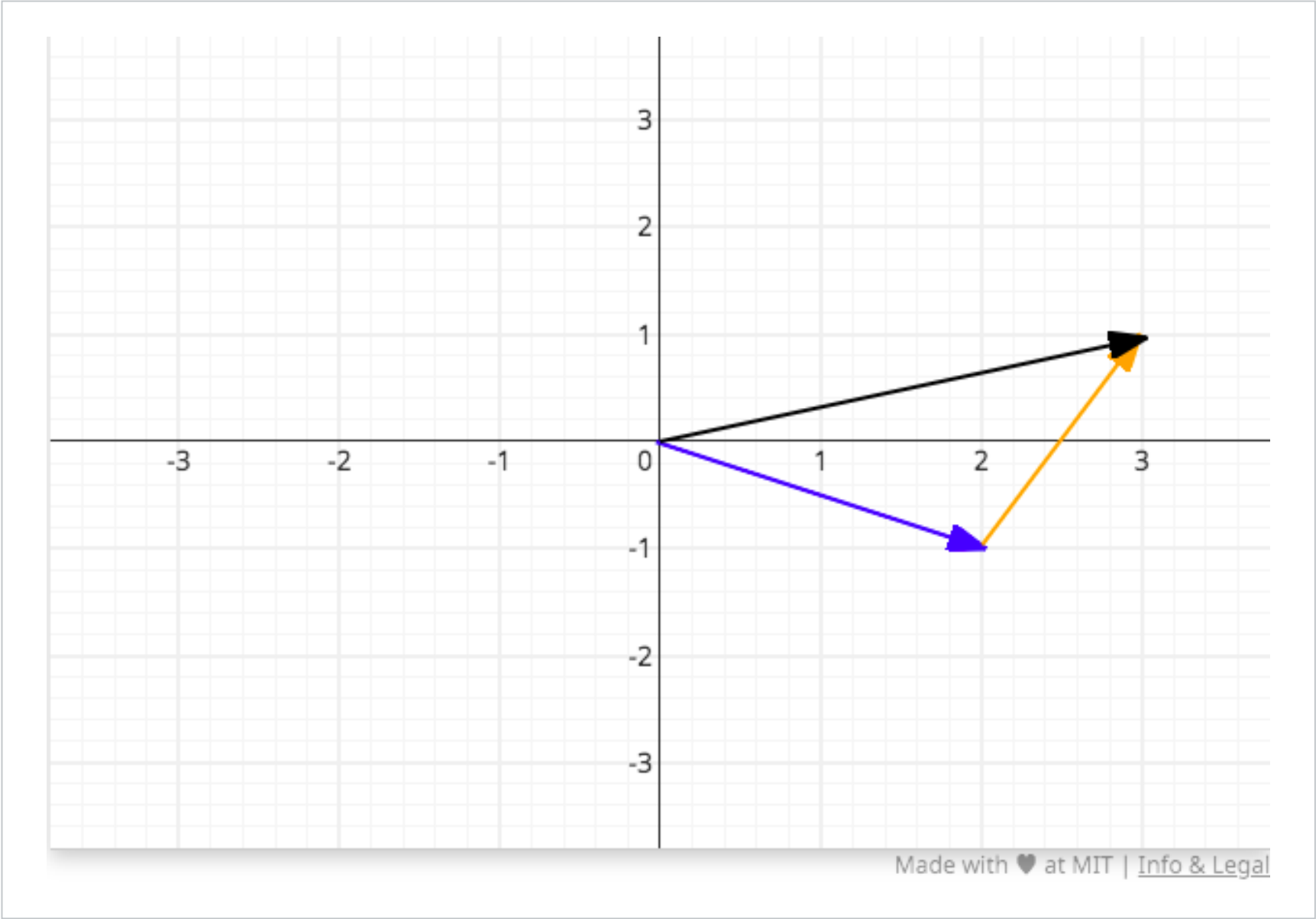
Solution:

The vector  $\vec{v} = \langle 2, -1 \rangle$  begins at the origin and extends to the coordinate  $(2, -1)$ . The vector  $\vec{w} = \langle 1, 2 \rangle$  can be drawn to begin at the point  $(2, -1)$  and extends to the coordinate  $(3, 1)$ . The vec

$$\vec{u} = \vec{v} + \vec{w} = \langle 2, -1 \rangle + \langle 1, 2 \rangle = \langle 2 + 1, -1 + 2 \rangle = \langle 3, 1 \rangle$$

(3.18)

starts at the origin and extends to the coordinate **(3, 1)**.



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You have used 1 of 25 attempts

**i** Answers are displayed within the problem

Sketch the vectors: subtraction

1.0/1 point (graded)  
Let

$$\vec{v} = \langle 2, -1 \rangle,$$

$$\vec{w} = \langle 1, 2 \rangle,$$

and

$$\vec{u} = \vec{v} - \vec{w}.$$

Sketch the vector  $\vec{v}$  in blue, the vector  $\vec{w}$  in orange, and the vector  $\vec{u}$  in black.

You can move a drawn arrow around the page using the select button an clicking on the arrow to drag it around the canvas. To edit a drawn arrow, click select and then click and drag either the start or end point of the vector.

Select

vector v

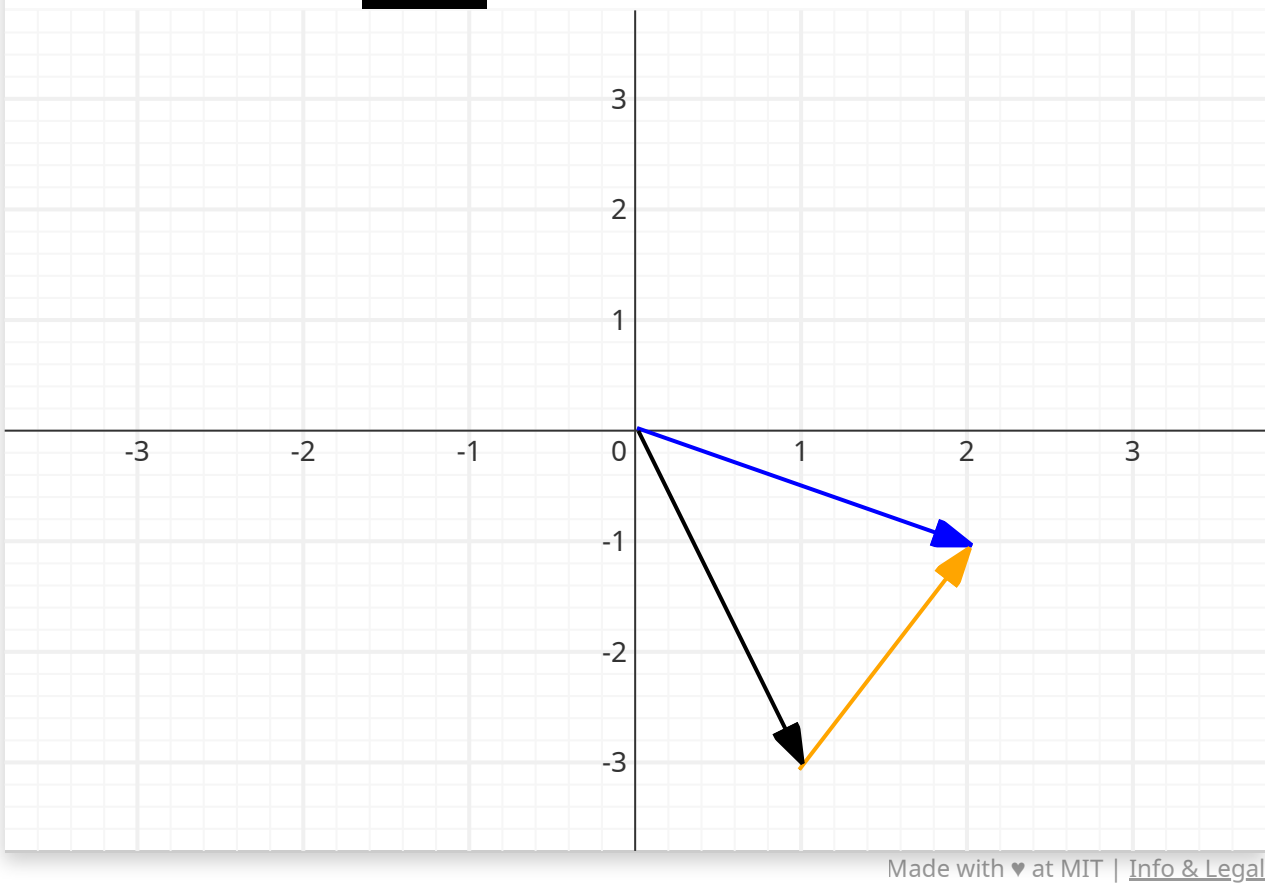
vector w

vector u

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Well done

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