

Draw the resultant vector represented by the vector operation.

$$u = \langle 2, -4 \rangle \quad v = \langle -3, -5 \rangle$$

3. $u + v$

$$\langle 2, -4 \rangle + \langle -3, -5 \rangle$$

$$\langle 2 + (-3), (-4) + (-5) \rangle$$

$$\langle -1, -9 \rangle$$

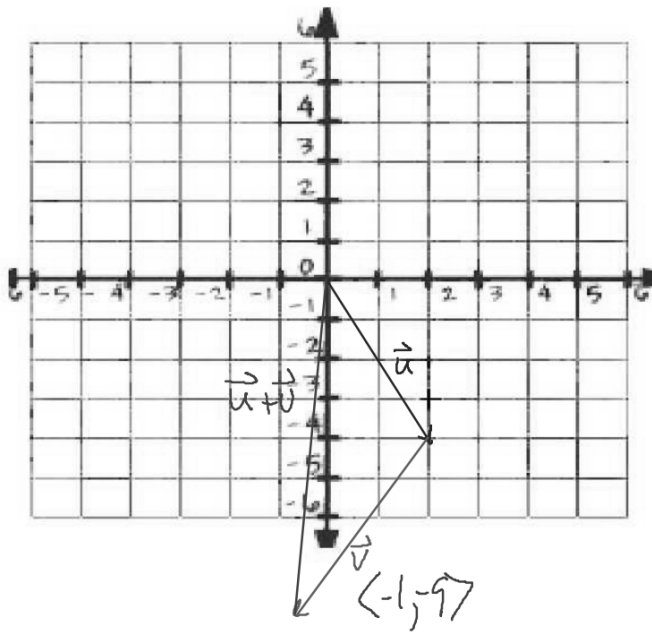
4. $v - u$

$$\langle -3, -5 \rangle - \langle 2, -4 \rangle$$

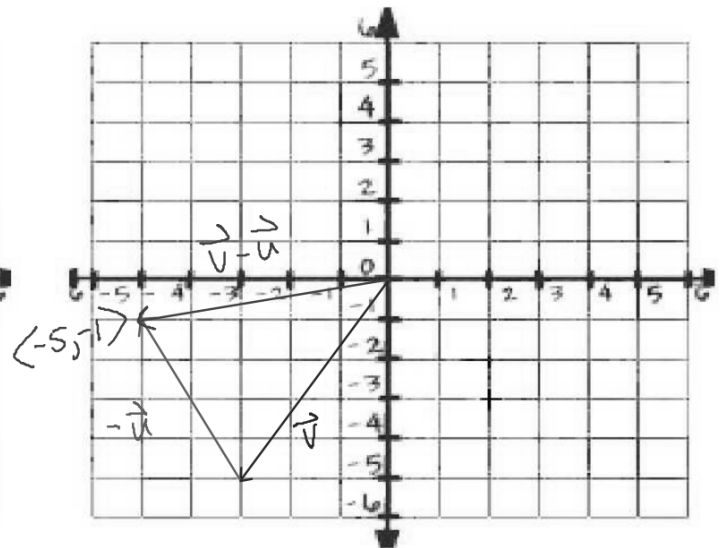
$$\langle -3 - 2, -5 - (-4) \rangle$$

$$\langle -5, -1 \rangle$$

$$\vec{u} + \vec{v}$$



$$\vec{v} - \vec{u}$$



Find the Component Form and Magnitude for each vector *Terminal - Initial*

$$P(-1,3) \quad Q(2,5) \quad R(-3,1)$$

$\overset{\text{In}}{\curvearrowright} \rightarrow \rightarrow \text{term}$

1. PQ

$$\langle 2 - (-1), 5 - 3 \rangle$$
$$\langle 3, 2 \rangle$$
$$\text{mag} = \sqrt{13}$$

$\overset{\text{In}}{\curvearrowright} \rightarrow \rightarrow \text{term}$

2. QR

$$\langle -3 - 2, 1 - 5 \rangle$$
$$\langle -5, -4 \rangle$$
$$\text{mag} = \sqrt{41}$$