

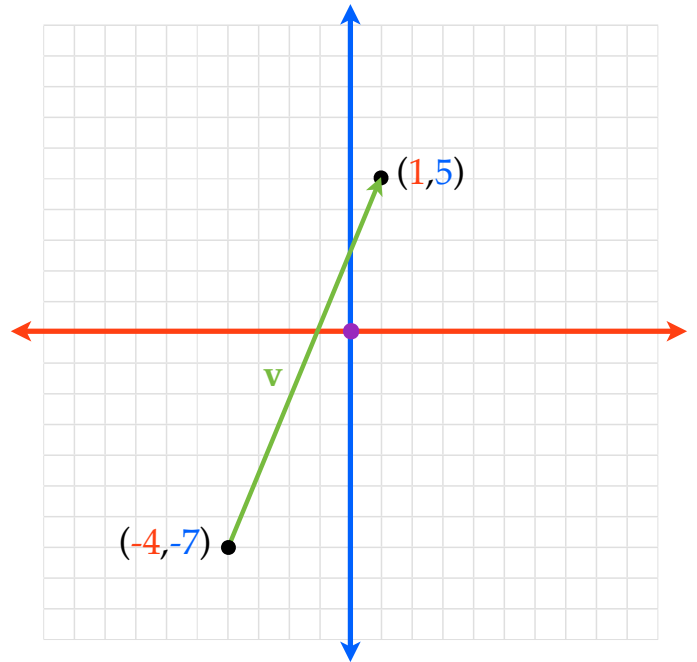
Magnitude of Vectors in  $\langle a, b \rangle$  Component Form

Name \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_

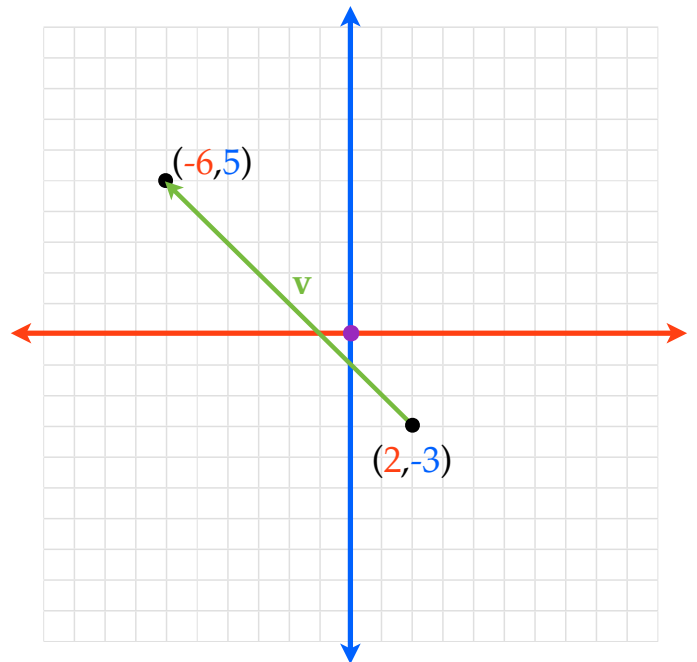
Given  $\mathbf{v}$  is has initial point  $P(x_1, y_1)$  and terminal point  $Q(x_2, y_2)$ , then...

$$\|\mathbf{v}\| = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$



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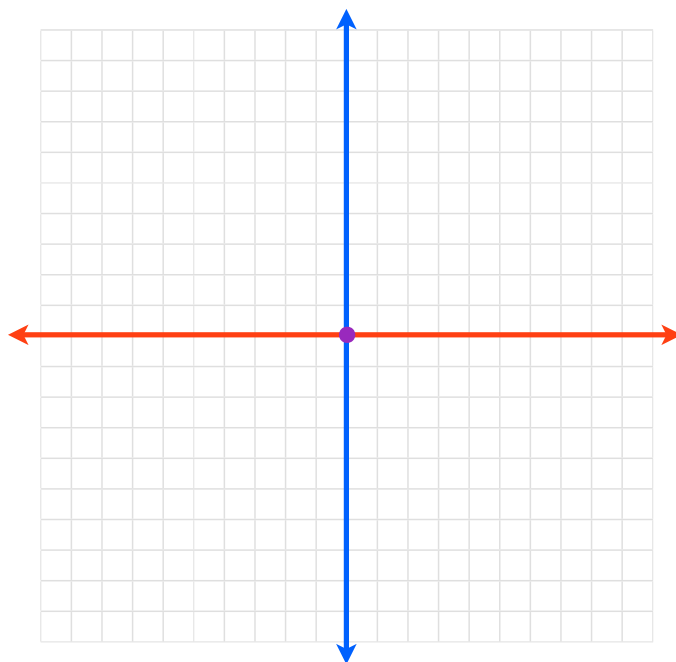
$$\|\mathbf{v}\| = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$



Given  $\mathbf{v}$  is in standard position and expressed in component form  $\mathbf{v} = \langle a, b \rangle$ , then...

$$\|\mathbf{v}\| = \sqrt{a^2 + b^2}$$

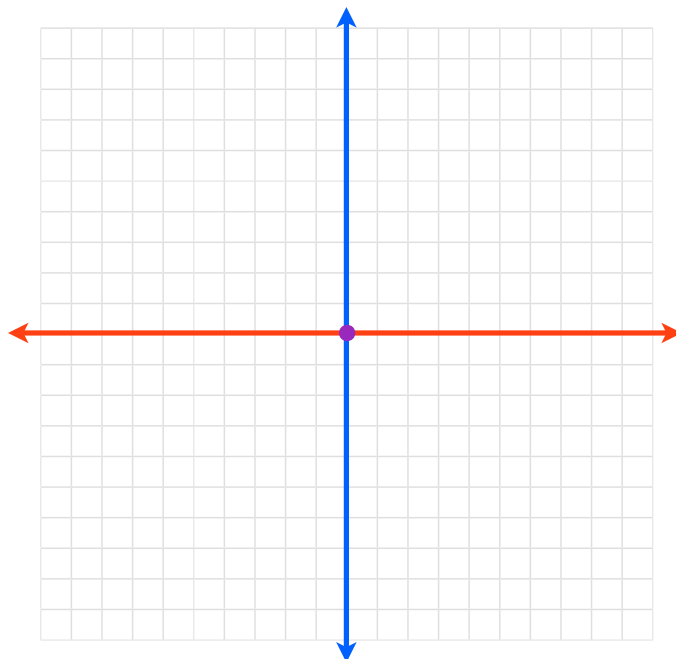
$$\mathbf{v} = \langle 3, 4 \rangle$$



Given  $\mathbf{v}$  is in standard position and expressed in component form  $\mathbf{v} = \langle a, b \rangle$ , then...

$$\|\mathbf{v}\| = \sqrt{a^2 + b^2}$$

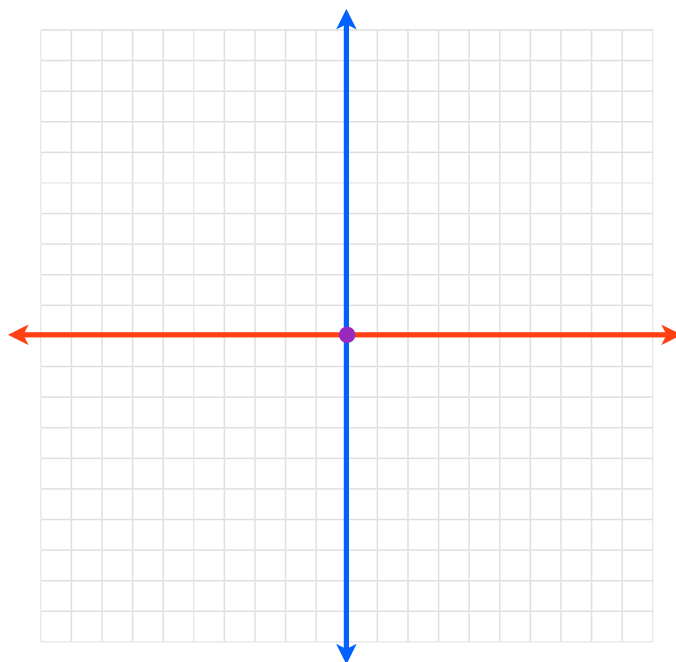
$$\mathbf{v} = \langle -8, -2 \rangle$$



Given  $\mathbf{v}$  is in standard position and expressed in component form  $\mathbf{v} = \langle a, b \rangle$ , then...

$$\|\mathbf{v}\| = \sqrt{a^2 + b^2}$$

$$\mathbf{v} = \langle 3, -6 \rangle$$



Given  $\mathbf{v}$  is has initial point  $P(x_1, y_1)$  and terminal point  $Q(x_2, y_2)$ , then...

$$\|\mathbf{v}\| = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Given  $\mathbf{v}$  is in standard position and expressed in component form  $\mathbf{v} = \langle a, b \rangle$ , then...

$$\|\mathbf{v}\| = \sqrt{a^2 + b^2}$$