PRE-CALCULUS · HOMEWORK

Write Vectors in Component Form

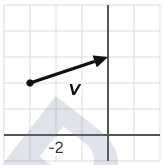
SCORE / 25

01 Part A · Practice

A vector from $P(x_1, y_1)$ to $Q(x_2, y_2)$ is $\langle x_2 - x_1, y_2 - y_1 \rangle = (x_2 - x_1)\mathbf{i} + (y_2 - y_1)\mathbf{j}$; from magnitude and direction: $\langle \|\mathbf{v}\| \cos\theta, \|\mathbf{v}\| \sin\theta \rangle$.

1 ●○○ A vector has magnitude 15 and direction angle 193°. Write it in component form. Round to hundredths.

2 ●○○ Write the vector $\mathbf{v}$ shown in component form and find its magnitude.

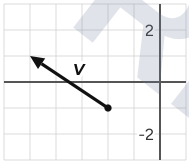


3 ●○○ Write $-9\mathbf{i} + 5\mathbf{j}$ in component form.

4 ●○○ Write $\overrightarrow{PQ}$ in component form for $P(-8, 4)$ and $Q(-5, -2)$.

5 ●○○ Write $\langle 3, 7 \rangle$ using $\mathbf{i}$ and $\mathbf{j}$.

6 ●○○ Write the vector $\mathbf{v}$ shown in component form and find its magnitude.



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Preview - the full worksheet and its answer key are at primeworksheet.com