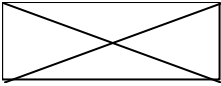


Vectors

Work in groups.

1. Give the components of the velocity vector for wind blowing at 18 km/hr toward the southeast. (Assume north is the positive y -direction.) Give the components in exact form.



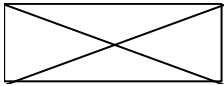
2. Draw the position vector for $\vec{v} = 3\vec{i} - 9\vec{j}$.

Find $||\vec{v}||$?

Find the angle between \vec{v} and the positive x -axis.

3. Find a vector with length 4 that points in the same direction as $\vec{i} - \vec{j} + 2\vec{k}$. Give an exact answer.

4. Find a unit vector from the point $P = (1, 2)$ and toward the point $Q = (4, 9)$. Give an exact answer.



5. Find a vector of length 5 pointing in the same direction. Give an exact answer.

