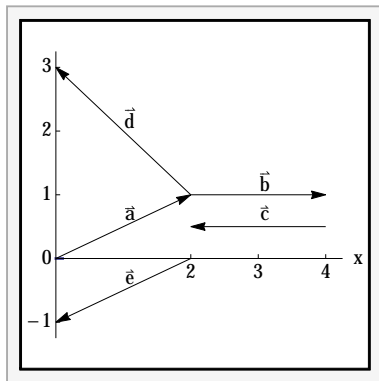


13.1 Displacement Vectors

Name:

Date:

P 2. Resolve the vectors into components.



P 3. Resolve the vector starting at the point $Q = (4, 6)$ and ending at the point $P = (1, 2)$, into components.

P 7. Perform the indicated computation.

$$(4\vec{i} + 2\vec{j}) - (3\vec{i} - \vec{j})$$

P 19. Find the length of

$$\vec{v} = 1.2\vec{i} - 3.6\vec{j} + 4.1\vec{k}$$

P 31. Find the value(s) of a making $\vec{v} = 5a\vec{i} - 3\vec{j}$ parallel to $\vec{w} = a^2\vec{i} + 6\vec{j}$.

P 37. For each of the four statements below, answer the following questions: Does the statement make sense? If yes, is it true for all possible choices of \vec{a} and \vec{b} ? If no, why not?

(a) $\vec{a} + \vec{b} = \vec{b} + \vec{a}$

(b) $\vec{a} + \|\vec{b}\| = \|\vec{a} + \vec{b}\|$

(c) $\|\vec{b} + \vec{a}\| = \|\vec{a} + \vec{b}\|$

(d) $\|\vec{a} + \vec{b}\| = \|\vec{a}\| + \|\vec{b}\|$