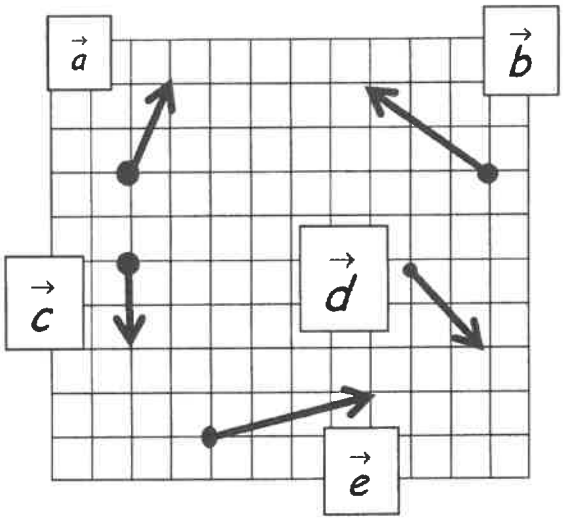
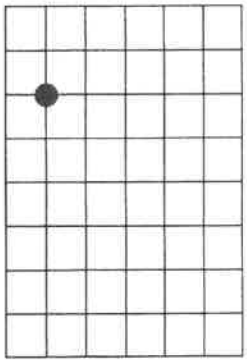
Vectors - Drawing, Component Form and Operations

Use these vectors using the given dot as the starting point to work the problems involving magnitude, direction, component form and operations.

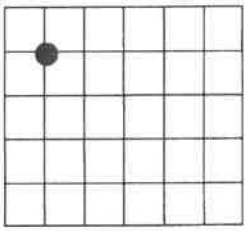


Use the dot as a starting point on the grid below to combine the vectors from above.

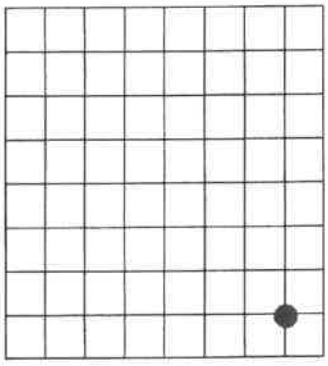
1. $2\vec{c}+\vec{d}$



2. $\vec{e}-2\vec{a}$



3. $\vec{b}-2\vec{c}$



4a. Find the component form of the vector $\overrightarrow{AB}$ for the points A (3, -2) and B (-2, 7).

b. Find the unit vector.

c. Find the trig component form of $\overrightarrow{AB}$. (calc ok)

5a. Find the standard unit vector form of the vector $\overrightarrow{AB}$ for the points A (4, -1) and B (-5, -2).

b. Find the standard unit trig vector form of $\overrightarrow{AB}$. (calc ok)

c. Find a vector (in standard unit vector form) in the same direction as $\overrightarrow{AB}$ with a magnitude of 8.

6. Let $\vec{v} = \langle -6, 3 \rangle$ and $\vec{w} = \langle 8, -3 \rangle$. Find the following vectors in component form.

a. $-3v - 8w$

b. $\frac{1}{2}w - \frac{3}{2}v$

7. Find the angle between the vectors in problem #6. (calc ok)