Vectors

1.

Write in terms of $\vec{v}$ and $\vec{w}$.

a. $\overrightarrow{LP}$

b. $\overrightarrow{HF}$
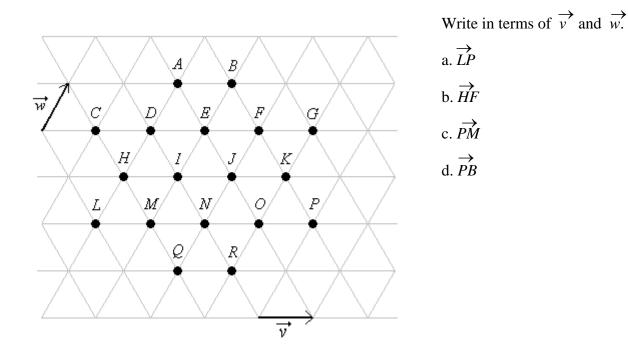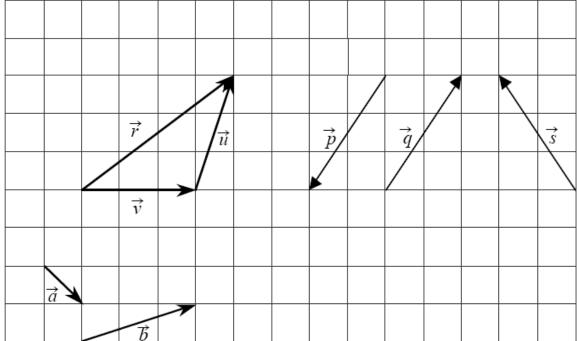
c. $\overrightarrow{PM}$

d. $\overrightarrow{PB}$

2. Each grid square is 1 unit along each side.

a. Which vector is the same as $\vec{u} + \vec{v}$? (Select one)   A. $\vec{r}$ B. $\vec{p}$ C. $\vec{q}$ D. $\vec{s}$

b. Which vector is the same as $\vec{u} - \vec{v}$? (Select one)   A. $\vec{r}$ B. $\vec{p}$ C. $\vec{q}$ D. $\vec{s}$

c. Which two vectors shown above are opposites?

d. Sketch and label the vector $\vec{w} = 2\vec{a} + \vec{b}$ on the grid.

e. Report the length of the vector $\vec{s}$ to three decimal places: $\|\vec{s}\| =$

f. What angle does the vector $\vec{s}$ make with the positive x-axis?
   Report to the nearest 0.1 degree.