## Graphical Vector Addition

## Name:

Date:

Using a ruler, protractor, and the given vectors to answer the following problems.
$\mathbf{A}=5.0 @ 30$ degrees
$B=6.0 @ 90$ degrees
C=4.0@ 210 degrees
$\mathbf{D}=8.0$ @ -45 degrees $\mathbf{E}=4.0 @ 180$ degrees $\mathbf{F}=5.0 @ 135$ degrees

Work no more than three problems per sheet. On each problem choose a scale for your drawing.
On each drawing give you scale so I can check your work. For instance 2 centimeters $=1$ unit.
Coose a scale that will make your drawings large enough to obtain answers with $5 \%$ percision.
If the exact answer is 4.0 @ 30 degrees then $4.2 @ 31$ degrees will be counted correct, but $5.0 @$ 35 degrees will be counted wrong.

1. Find $\mathbf{A}+\mathbf{B}$
2. Find $\mathbf{E}+\mathbf{A}+\mathbf{C}+\mathbf{B}$
3. Find $3 \mathbf{A}$
4. Find 2 B - F
5. Find $\mathbf{D}+\mathbf{F}+\mathbf{B}+\mathbf{E}$
6. Find $\mathbf{D}-2 \mathbf{A}+\mathbf{C}$
