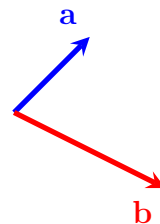
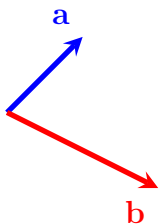


MAT 238 (Calculus 3), Prof. Jim Swift
Worksheet 2: Vector Addition, Subtraction, and Scalar Mult.

Draw these vectors **a** and **b** on your own paper (or download the pdf to your tablet).



1. Draw $\mathbf{a} + \mathbf{b}$ on top of the left figure.
2. Draw $2\mathbf{a}$ and $-\mathbf{a}$ on top of the middle figure.
3. Draw $\mathbf{a} - \mathbf{b}$ on top of the right figure. Hint: $\mathbf{b} + (\mathbf{a} - \mathbf{b}) = \mathbf{a}$.
4. Estimate the scalars s and t so that $\mathbf{x} = s\mathbf{a} + t\mathbf{b}$ for the vectors shown below.

