

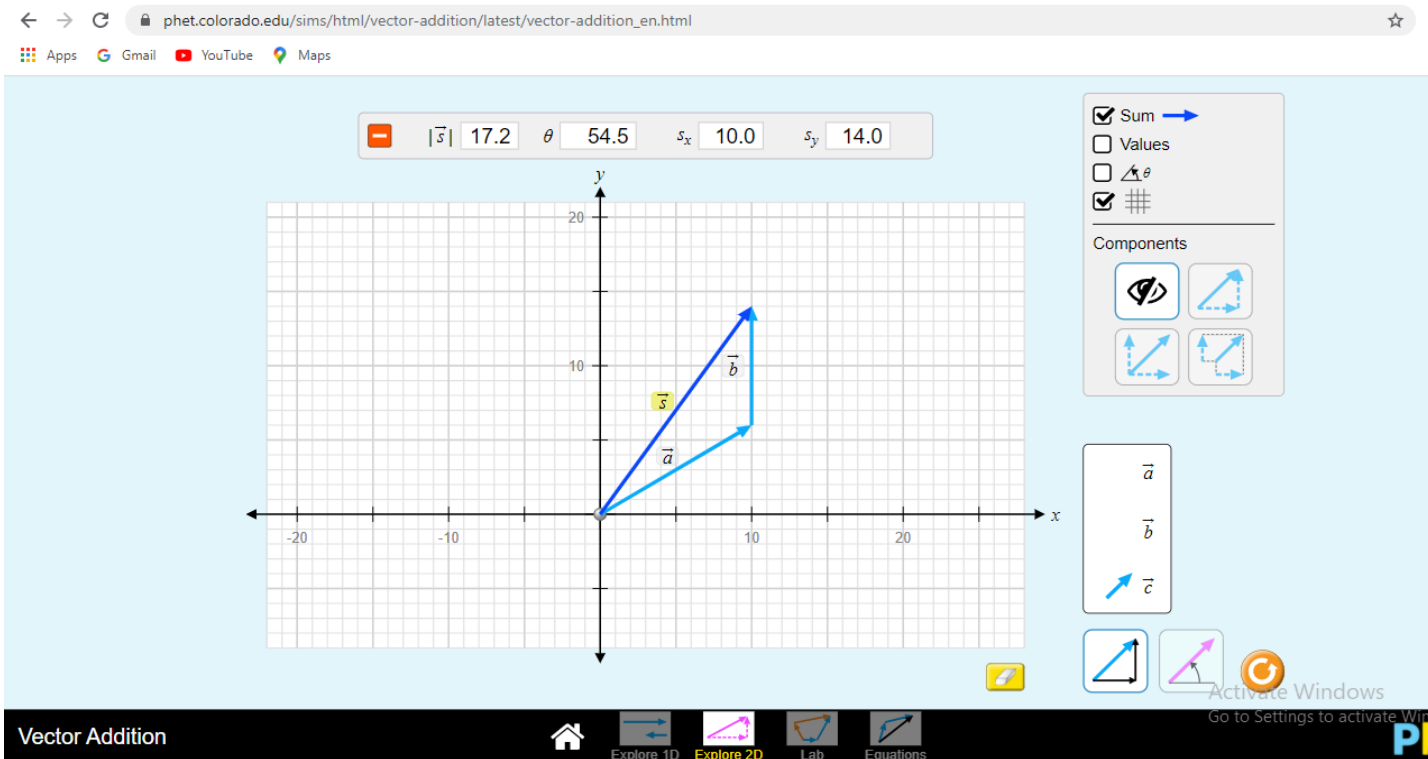
# Vector Addition

-Using [https://phet.colorado.edu/sims/html/vector-addition/latest/vector-addition\\_en.html](https://phet.colorado.edu/sims/html/vector-addition/latest/vector-addition_en.html)

Complete the table using the given data (using the graphical method)

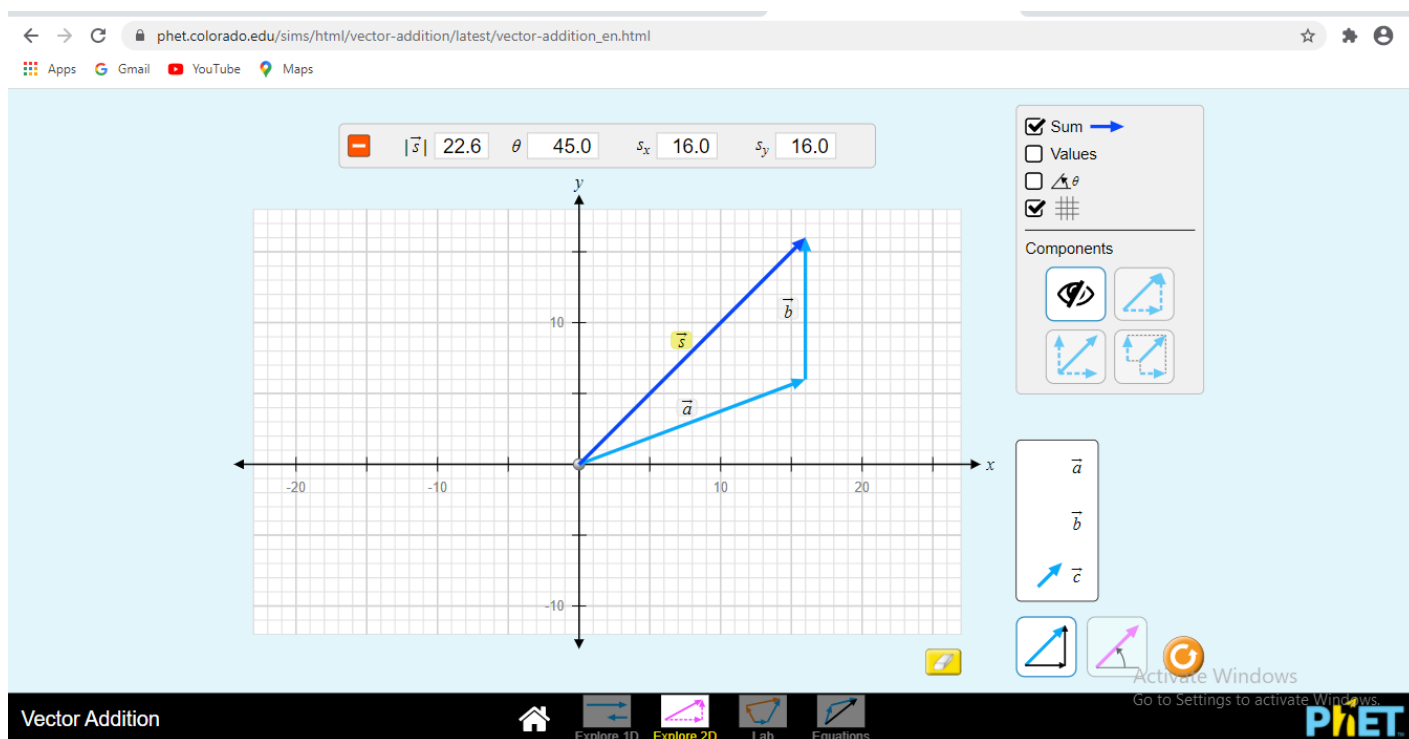
$$|\vec{a}|=11.3 \text{ and } \theta=31 \quad |\vec{b}|=8.0 \text{ and } \theta=90$$

| Vectors   | Magnitude | Degree | X component | Y component |
|-----------|-----------|--------|-------------|-------------|
| $\vec{a}$ |           |        |             |             |
| $\vec{b}$ |           |        |             |             |
| $\vec{c}$ |           |        |             |             |



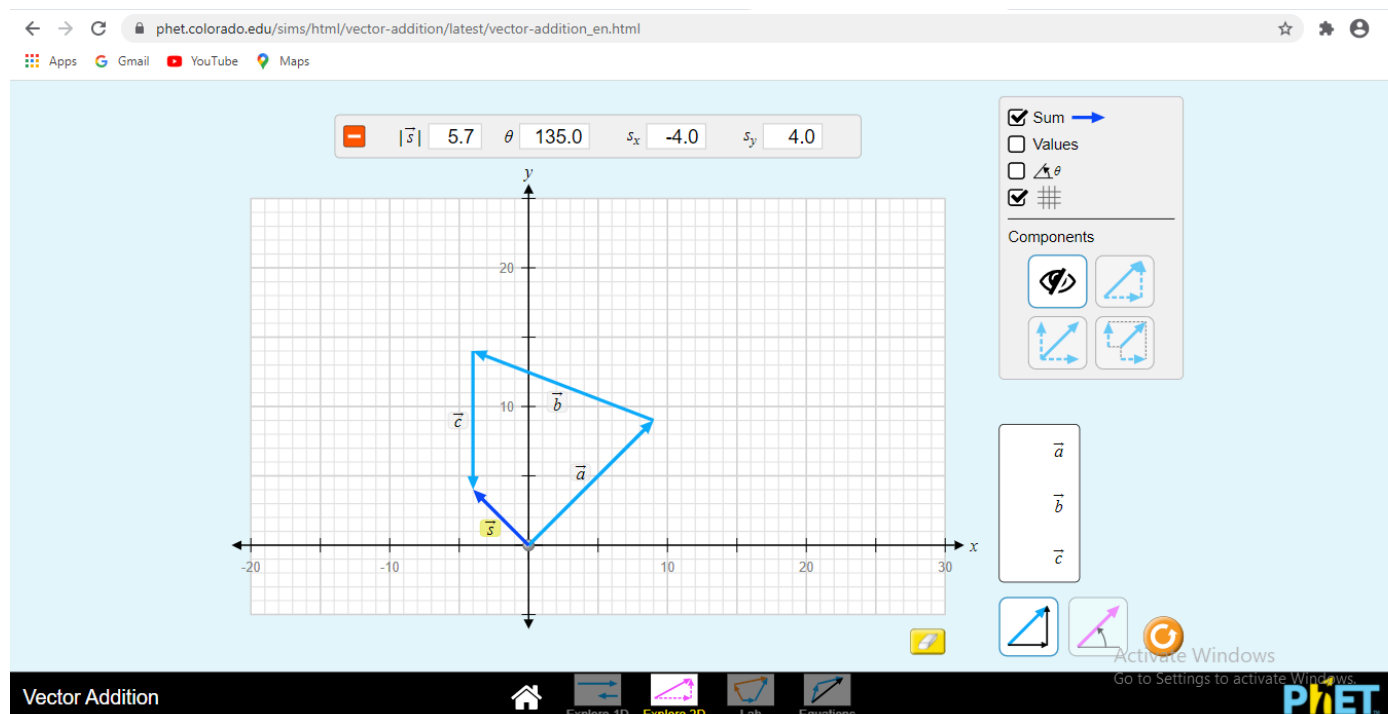
Complete the table using the given data (using the graphical method)

| Vectors   | Magnitude | Degree | X component | Y component |
|-----------|-----------|--------|-------------|-------------|
| $\vec{a}$ | 17.1      | 20.6   |             |             |
| $\vec{b}$ | 10.0      | 90.0   |             |             |
| $\vec{c}$ |           |        |             |             |



Complete the table using the given data (using the graphical method)

| Vectors         | Magnitude | Degree | X component | Y component |
|-----------------|-----------|--------|-------------|-------------|
| $\vec{a}$       | 10.2      | 45     |             |             |
| $\vec{b}$       | 13.9      | 159.0  |             |             |
| $\vec{c}$       | 12.0      | -90.0  |             |             |
| $d \rightarrow$ |           |        |             |             |



Classify each of the following physical quantities as vectors or scalars:

| Vector quantity | Scalar quantity |
|-----------------|-----------------|
| Force           | Mass            |
| Weight          | Density         |
| Acceleration    | Volume          |
| Velocity        | Speed           |
|                 | Distance        |

