VECTORS

Vectors: consist of a number and a direction

Scalars: consist only of a number

Addition of vectors

When vectors point in the same direction:

\[
\begin{align*}
3 \text{ m/s} & \quad + \\
8 \text{ m/s} & \quad = \\
11 \text{ m/s} & \quad \text{resultant vector}
\end{align*}
\]
When vectors point in different directions, use parallelogram rule:

\[ \sqrt{3^2 + 8^2} = 8.5 \text{ m/s} \]
Breaking a vector down into components: