Vector Geometry

Station guide

At this station we explore vectors and their many representations. Thinking about and comparing different approaches is encouraged throughout the resources, which range from addition of vectors to work on mechanics including projectiles, friction and forces.

Hit the spot encourages students to become comfortable with switching between different representations of vectors and helps them to appreciate why vector addition is commutative. Vector squares and Lots of vector lines! ask students to think about how geometric properties of lines are encoded in vector equations as well as thinking about the similarities and differences between Cartesian and vector form. Three lines takes the vector equation of a line into three dimensions.

Vectors play an important role when thinking about mechanics problems and this is reflected through resources such as Make it equal, which looks at particles in equilibrium, and Make it stop! where students combine vectors with ideas about kinematics and Newton's laws of motion. Kinematics, projectiles and constant acceleration are brought together in Where did it land? and One windy day, while A frictional story explores a particle on a slope and aims to highlight that the model of friction is $F_r \leq \mu R$ and not $F_r = \mu R$.