

## S.5 MATH

### TERM 3 HOLIDAY WORK, 2025

In your exercise books, make research about the following

- (i) vector definitions, representation, and vector algebra in 2D
- (ii) determine magnitude and direction of a vector to calculate the distance between two points and length of a vector in 3D,
- (iii) compute the product of two vectors: • dot product • cross product and their applications.
- (iv) state and apply the ratio theorem.
- (v) numerical problems on how to derive vector, parametric and Cartesian equations of a line.
- (vi) Learners think-pair and share how the dot product is applied to find the angle between two lines.
- (vii) how to determine the distance of a point from a line.
- (viii) determining the point of intersection of lines.
- (ix) properties of skew lines.
- (x) determining an angle between two lines

#### References:

- Digital teachers' website
- Rowa e-learning platform (you tube) simply search for *vectors rowa-elearning platform*
- Understanding pure mathematics

**END**