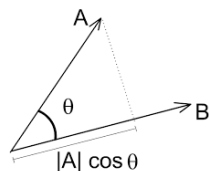


## 1. Goals



By the end of this unit, students:

- understand the concepts and techniques in combinatorics, geometry and vectors
- apply reasoning skills and solve problems in combinatorics, geometry and vectors
- communicate their arguments and strategies when solving problems
- construct proofs in a variety of contexts including algebraic and geometric
- interpret mathematical information and ascertain the reasonableness of their solutions to problems.

This week's focus:

- Applications - Forces

## 2. Theoretical Components

STEP 1:

Readings:

Read examples: ABOUT/RESOURCES/2021 S1

Force as a vector: <http://goo.gl/psVryb>

Watch the video:

Force & Work: <https://goo.gl/o2zCYY>

Play with these applets:

[https://mathinsight.org/vector\\_introduction](https://mathinsight.org/vector_introduction)

[https://mathinsight.org/vectors\\_cartesian\\_coordinates\\_2d\\_3d](https://mathinsight.org/vectors_cartesian_coordinates_2d_3d)

[https://mathinsight.org/dot\\_product](https://mathinsight.org/dot_product)

## 3. Practical Components

STEP 2:

Attempt all the questions:

ABOUT/RESOURCES/2021 S1/ WK16

## 4. Investigation

No investigations this week.

Prepare thoroughly for the In-Class.

In-Class will be on Wednesday.

## 5.QFO

Quiz/Forum/Other

Additional reading on multiplying vectors:

<http://goo.gl/6rVbQQ>

<https://goo.gl/tDjIAO>