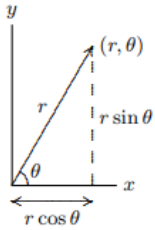


## 1. Goals



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:

- Vectors – introduction.
- Polygon of vectors & Position vectors
- Linear Combination of non-parallel vectors & Vector components

## 2. Theoretical Components

STEP 1:

Readings:

Read examples: ABOUT/RESOURCES/2021 S1/WK14.

Vectors: <http://goo.gl/dFhTAv>  
Position Vectors: <http://goo.gl/0vurhL>  
Linear Independence: <http://goo.gl/k7rTQ5>  
<http://goo.gl/bJgiWy>

Watch videos with examples:

Vectors:  
Intro: <https://goo.gl/ZrcGL7>  
+/-: <https://goo.gl/PGOJMg>

## 3. Practical Components

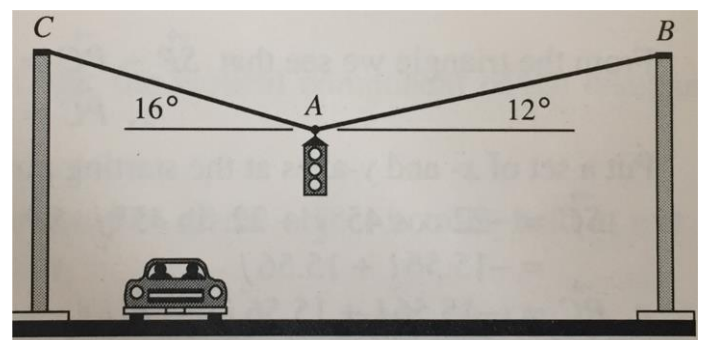
STEP 2:

Attempt all the questions:

ABOUT/RESOURCES/2021 S1/WK14.

## 4. Investigation

A set of traffic lights is suspended as shown. Find the forces needed in each of the cables AC and AB to support the traffic light with a weight of 20N.



20 marks

## 5.QFO

Quiz/Forum/Other

Do this quiz: <https://goo.gl/RU6gmV>