

Read p 100-103
106-107
110
p 106 (1, 2)

P111(1, 2)

P118(2, 3, 4)

1. (a) wet no smell
Clear boils at 100°C
liquid Freezes at 0°C
drinkable
can be a solid

(b) glass
breakable
made out of sand solid clear.
Sharp

P III

1) At least different substances.

2) solution \rightarrow liquid and at least one other substance mixed together.

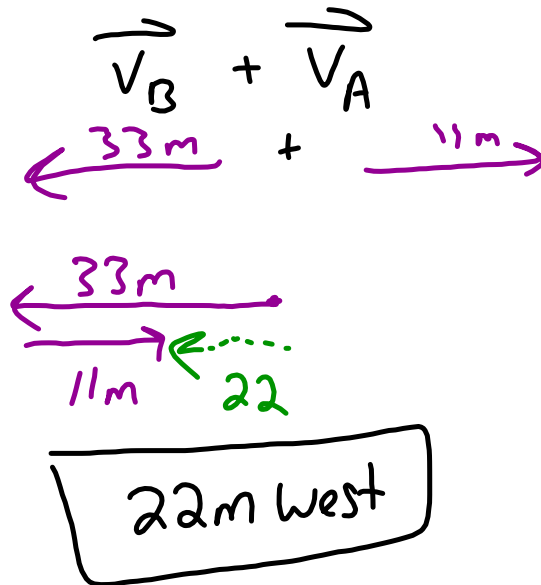
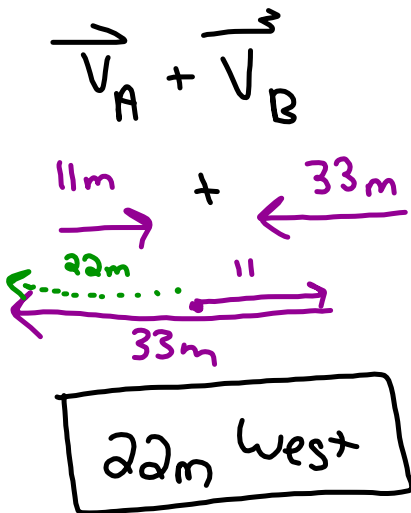
Physics II
Feb 11 2019
"vectors"

vector \rightarrow A physical quantity that has both magnitude and direction.



- When adding vectors, we can add them in any order as long as they are connected tip to tail.
- The resultant vector (solution) is a vector constructed from the tail of the first vector to the tip of the last vector being added.

Example:



Example # 2

$\vec{V}_A = 8\text{ m Left}$

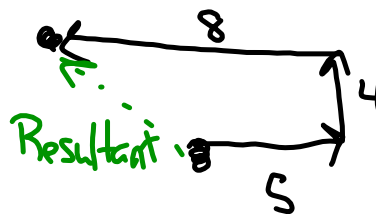
$\vec{V}_B = 4\text{ m up}$

$\vec{V}_C = 5\text{ m right}$

$\vec{V}_A + \vec{V}_B + \vec{V}_C$



$\vec{V}_C + \vec{V}_B + \vec{V}_A$



How do we determine when there are more than two vectors being added?

- Determine the resultant vectors in both the horizontal and vertical planes. Now put these together.

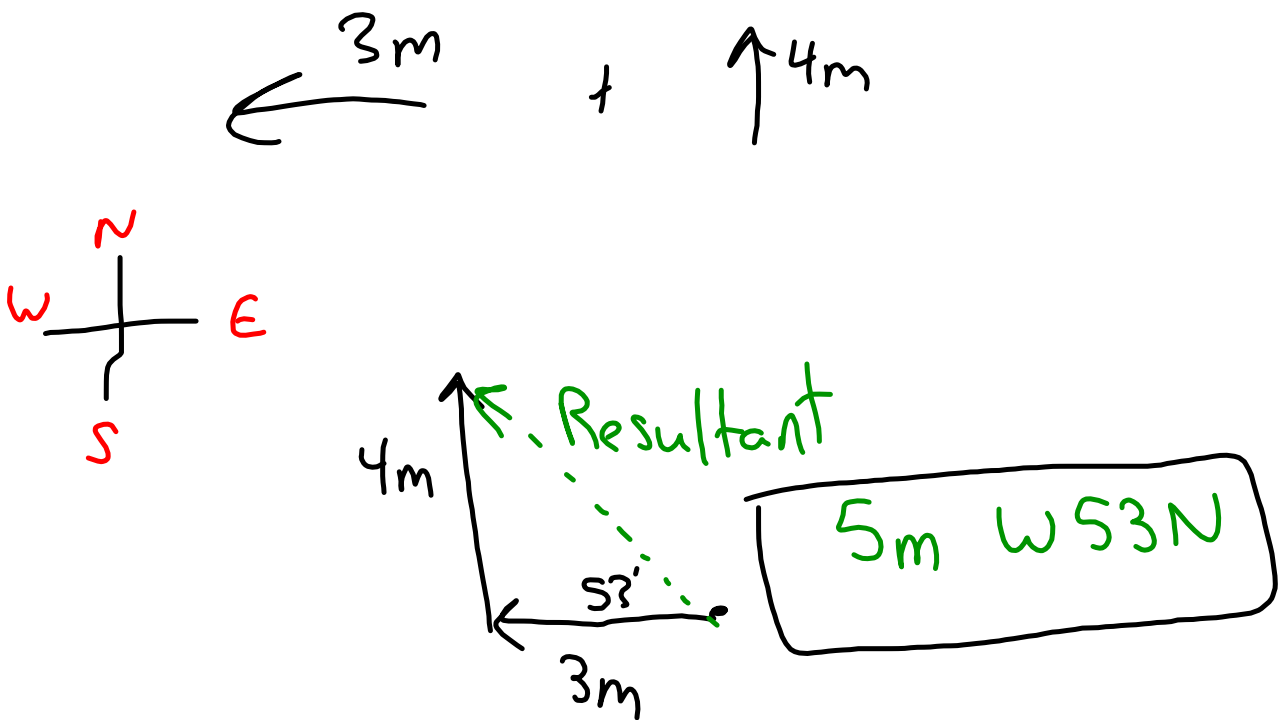


Horizontally



Vertically





There are two methods when adding vectors.

1) Mathematically

- Pythagorean
- Trig

} SO_{far}

2) Graphically

Graphically - Draw

- Determine a scale such
as $1 \text{ cm} = 1 \text{ m}$
 $1 \text{ cm} = 10 \text{ m}$
 $1 \text{ cm} = 1 \text{ km}$
 $1 \text{ cm} = 10 \text{ km}$

- Use ruler and protractor to determine the resultant.

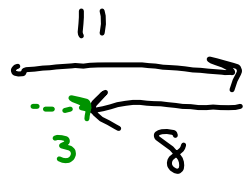
$$\vec{V}_A = 11 \text{ m East}$$

$$\vec{V}_B = 8 \text{ m West}$$

Scale $\rightarrow 1 \text{ cm} = 1 \text{ m}$

Every cm represent 1m.

11 m east → measure 11 cm
 8 m west → measure 8 cm

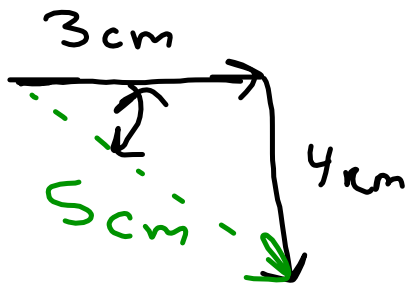


↑ you will measure 3 cm which represents 3 m.

Example: 30 m East →
 40 m South

Scale 1 cm = 10 m

30 m East : Construct 3 cm →
40 m South : Construct 4 cm ↓



- Measure 5 cm
- This represents 50m
- Use the protractor to measure the angle
- Measure S?

50m ESS

- Measure and convert
- Use protractor to determine direction.