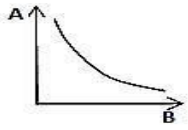
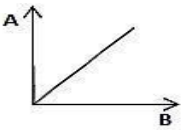
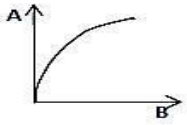
PENANG SANGAM HIGH SCHOOL
YEAR 11 PHYSICS
WEEK 2
Dates: (07/06/21) to (11/06/21)

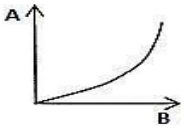
WORK SHEET 2

1. The graph that shows that A is **directly proportional** to B is

A.


B.


C.


D.


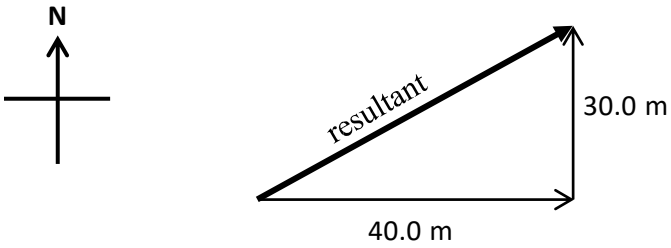
2. In an experiment the following results were obtained as shown below in the table.

Pressure (Pa)	35	23	14	6	3
Volume (cm^3)	2.4	3.2	4.4	6.2	7.3

i. Plot a graph of Pressure against Volume on a pair of axes in the **Answer Booklet**.

ii. State the **relationship** of pressure and volume from the graph drawn.

3. Roy walks 40.0 m East, then 30.0 m North.



i. Calculate the total distance Roy walked.

ii. Determine the magnitude and direction of Roy's resulting displacement.

4. A police car gives a chase and accelerates from rest with an acceleration of $2.5m/s^2$. For safety reasons the police car can only travel at a top speed of $120km/h$.

i. Calculate the distance that the police car takes to accelerate from rest to reach the top speed of $120km/h$.

ii. Calculate the time taken by the police car to reach the top speed of $120km/h$.

5. a.State the number of significant figures in the following:

i. 3.788×10^9

ii. 0.0053

b. Compute the following to the correct number of significant figures or decimal places.

i. 7.62 – 0.0023

ii. 9.45 × 2.5

6. A Tennis ball is thrown vertically upwards and reaches its maximum height after 2.4s.

i. What happens to velocity once the ball reaches maximum height?

ii. Since the ball takes 2.4s to reach the maximum height. Calculate it's initial velocity.

iii. Calculate the maximum height reached.

iv. Determine the total time of flight.