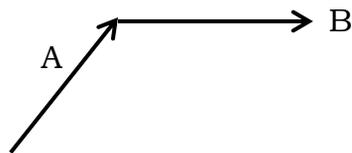


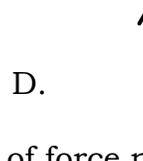
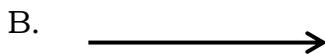
**PENANG SANGAM HIGH SCHOOL**  
**YEAR 12 PHYSICS**  
**WEEK 1**  
**Dates: (31/05/21) to (04/06/21)**

WORKSHEET 1

1. The number of significant figures in 0.0790 is
  - A. 2
  - B. 4
  - C. 3
  - D. 5
  
2. Which of the following is true when multiplying and dividing uncertainties?
  - A. Percentage uncertainties are always subtracted.
  - B. Percentage uncertainties are always added.
  - C. Percentage uncertainties are multiplied and divided.
  - D. Percentage uncertainties remain the same.
  
3. For the relationship  $A = kB^2$ , how would the value of A be affected if the value of B doubles?
  - A. A decreases by factor of 4
  - B. A increases by factor of 3
  - C. A quadruples
  - D. A doubles
  
4. Two vectors A and B are shown below:



Which of the following arrows would best represent the resultant vector?



5. In acceleration down slopes, the component of force parallel to the inclined plane is

A.  $F = mg\cos\theta$

C.  $F = 0$

B.  $F = mg\sin\theta$

D.  $F = mg$

6. What happens to the load when an object is in equilibrium?

A. Load moves to the left.

B. Load remains as it is.

C. Load is static.

D. Load turns in direction of greater force.

7. What is the acceleration of a body when it is thrown vertically upwards?

A.  $a = 10\text{m/s}^2$

C.  $a = -10\text{m/s}^2$

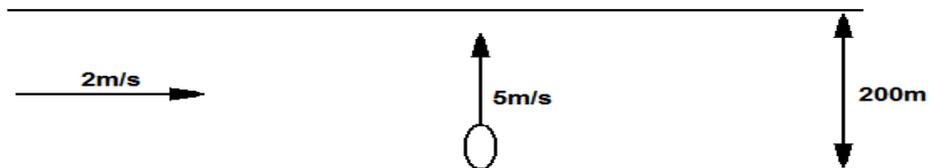
B.  $a = 0$

D.  $a = \text{maximum}$

8. A piece of paper is measured to be  **$5.63 \pm 0.15 \text{ mm}$**  wide and  **$64.2 \pm 0.7 \text{ mm}$**  long. What is the area of this piece of paper?

9. The kinetic energy of an object is  $E_k = \frac{1}{2}mv^2$ . The mass is now halved and the speed doubled. What is the new kinetic energy in terms of  $E_k$ ?

10. A boat at right angles to the banks of a river sets out at 5m/s. The river is 200m wide and flows at 2m/s downstream.



a. How long will it take the boat to cross the river

b. How far downstream does the boat land?

c. What is the speed and direction of the boat relative to the river bank?