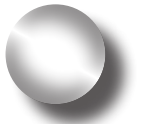


# Assessment tasks

## 6.1 Formal assessment





Name: \_\_\_\_\_

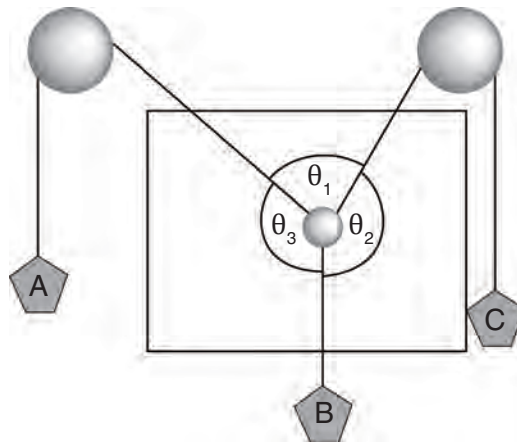
Date: \_\_\_\_\_

## Experiment

- Aim:**
- Determine the resultant of two co-planar vectors.
  - Determine the weight of the object.

**Method:**

- Set up a force board as shown in the sketch. A and C are mass pieces of your choice. B is an object of unknown mass. Write down the masses of each piece A and C on the paper behind the strings. First convert the masses to kilograms and then calculate their weight in newton, using  $F_g = mg$ .



- Draw a dot in the middle of the ring where the cord is connected and trace the positions of the strings onto the ring, being as accurate as possible.  
Try to get the three lines to pass through the dot in the middle.  
HINT: It helps to first mark two points for each string, and then to join them.
- Take the paper off the board and use a protractor to measure  $\theta_1$ ,  $\theta_2$  and  $\theta_3$ .
- Redraw an accurate copy of these forces in the space below.





5. Use either the head-to-tail method or the parallelogram method on scale to find the resultant force of A and C on the sketch above.

6. What is the magnitude of the equilibrant of forces A and C?

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7. What is the magnitude of the weight of object B?

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**Conclusion:**

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