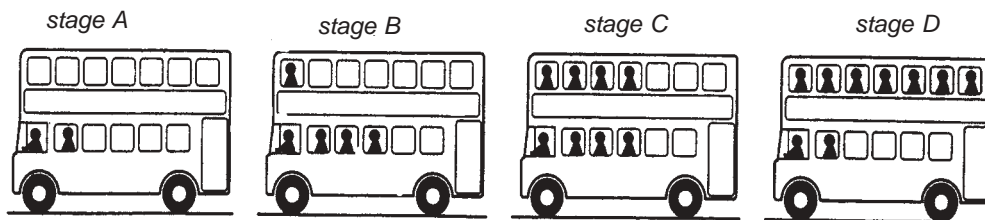
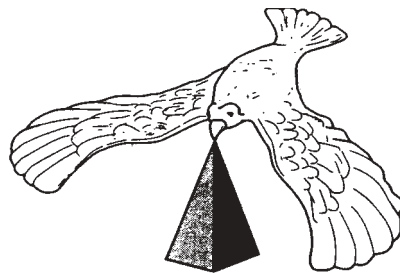


## Self Test taken from Physical Science IGCSE

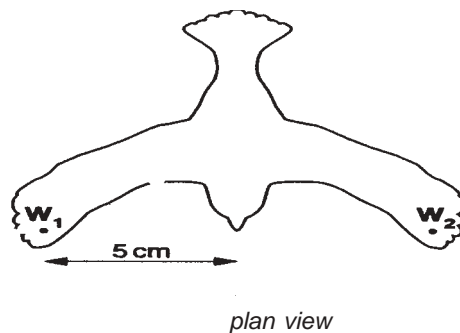
1. The diagrams show a bus at four different stages of a journey.  
At which stage does the bus with its passengers have the **lowest** centre of mass?



2. The diagram shows a toy bird which balances on its beak.



- (a) The weight of the bird is 0.65 N. Calculate its mass. ( $g = 10 \text{ N/kg}$ )
- (b) Mark, **on the diagram above**, a possible line on which the centre of gravity of the bird lies.
- (c) The diagram shows a view from above the bird.



The bird balances because there are weights in each wing. The weights ( $W_1$  and  $W_2$ ) are each 0.3 N. Stating the formula you use, and showing your working, calculate the moment of  $W_1$  about the bird's beak.