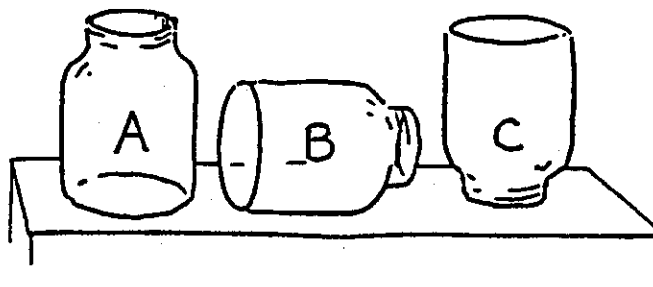


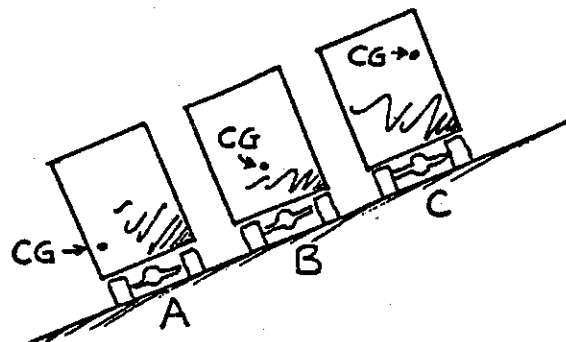
Concept-Development Practice Page 10-1

Center of Gravity

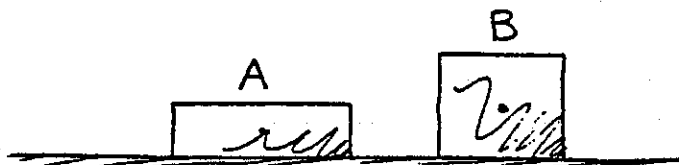
1. Which bottle is the most stable? _____
 least stable? _____
 neutral? _____



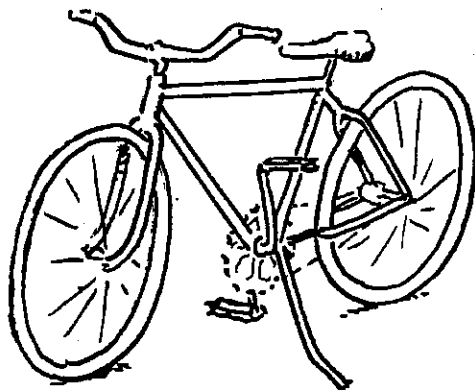
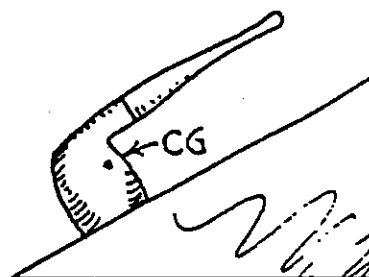
2. Draw vectors for the weight of each truck.
 Which truck will tip over? _____
 Why? _____



3. Both blocks have equal mass. Which requires more work to tip over? _____
 Why? _____



4. Why or why not will the pipe tip over?

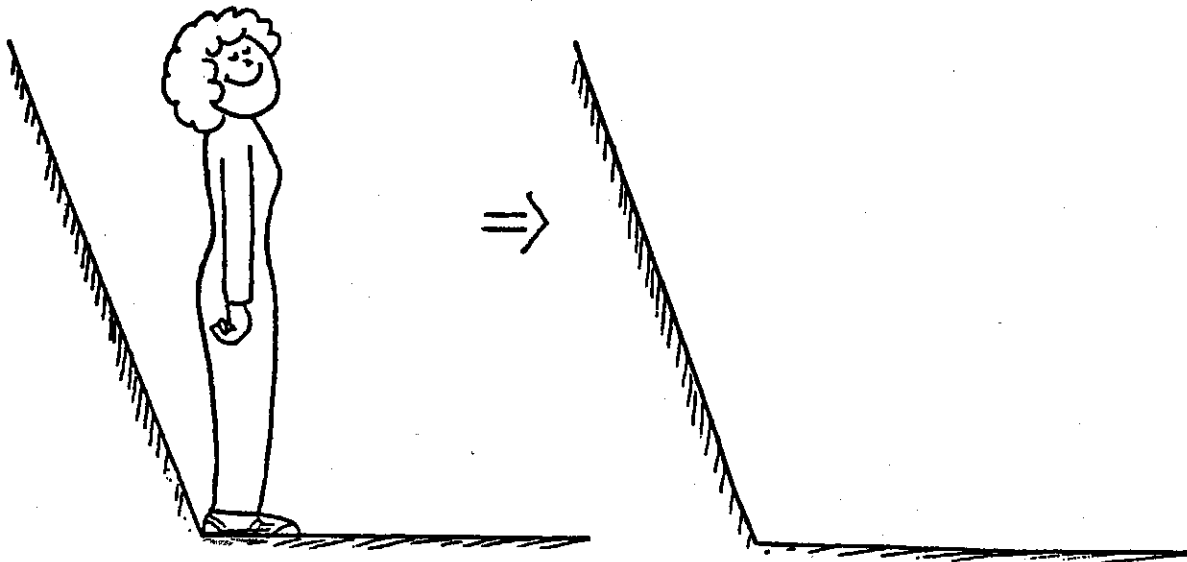


5. The wheels of a bike provide two points of contact with the ground. A kick stand provides a third. Sketch in the triangular area bounded by the three points of ground contact. Where is the CG of the bike with respect to this area?

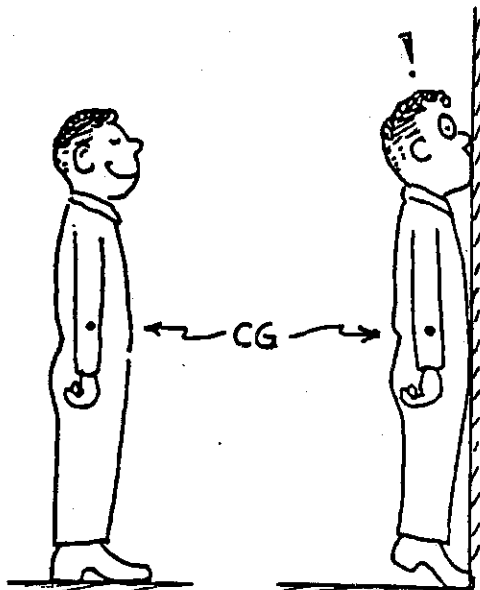
Conceptual PHYSICS

6. Ordinarily when you stand with your back and heels to a wall, you cannot bend over and touch your toes without toppling forward. Why?

But if you stand with your back and heels to the slanted wall below, you *can* lean over and touch your toes without toppling. Complete the sketch to the right to show how.



7. A person stands upright without difficulty. On each of the sketches below, draw the weight vector and show why the same person cannot stand on tiptoes against the wall.



Conceptual PHYSICS