1A—The B mirror would make the image smaller, just like the rear view mirror on your car.	5B—Cover the left-hand man at A and the post at B. What do you see? Rope tension is always measured from one end with respect to the other end.	9B—The second moment of inertia of A is much higher than B.
2B—1 Foot. The center of the roller moves one-half as fast as its top edge and the board. Imagine that the floor is just another board moving the other way, or imagine the roller is zero diameter.	6A—Unfair? The problem here is that A is a dirigible and B is a constant-volume balloon. Each is unfamiliar now. Dirigible A has floppy internal bags of gas which can change volume--unlike a blimp, and as the vessel rises they expand. B cannot expand--much like a blimp. An object in fluid is buoyed up by a force equal to the weight of the fluid displaced. (Archimedes). A goes higher.	10B—The energy imparted to each ball by the crank will be the same, since the arms are the same length. Thus the ball will raise the same amount and the B ball will swing out farther.
3A—The water at the bottom B is densest at 4°C, but the water at A is 0°C when changing from ice into water.	7B—A is fine for towing but out-of-control when docking due to the barge's inertia.	11A—The top gear pulls the top of the lower gear. Thus the lower gear turns in direction A.
4A—There are two force vectors to be summed. One from the bumper affects A and B equally, while the force vector from the center of gravity of the cart plus load is closer to A. The lim F(slope) solution is also easy.	8A—The farther an object's center of gravity is above its balance fulcrum, the harder it will be to balance. So A is easier to balance.	12B— By the concept of limits, if the full angle between the two cords supporting the 100 lbs., Is close to zero degrees, then each cord supports 50 lbs., thus the weight is 50 lbs. If the full angle of the rope supporting the weight is closer to 180 deg., then B becomes very great.