Written Problem 8: Doorknobs
Notice that throughout your life, doorknobs have always been located on the opposite side of the door from the hinge. As an April Fool's joke, somebody decides to rework every doorknob in the building so that it is very close to the hinge. You can still open every door in the building, but it's much tougher! Explain why it is so much tougher.

1 point for mentioning this is a rotational motion situation: the door is rotating and the hinge is the pivot.
1 point for mentioning that if the doorknob is *far* from the hinge, the *r* term of the *r cross F* equation is much larger, leading to more torque
1 point for mentioning that if the door knob is near the hinge, the *r* term is less and a much larger *F* (force) term is necessary to achieve the same torque

Written Problem 9: An idiots way to push a door

Why don't doors turn when you push them inward, from the long end?

Written Problem 10: Wrenches
How do wrenches work?