Rotational Mechanics I

Consider the diagram. Describe in as much detail as you can why the rate of rotation of the disk (its angular velocity) increases.


What would be the effect on the speed of rotation from increasing the radius of the larger disk, while keeping its mass and axle constant?

| Faster? | Same? | Slower? |
| :--- | :--- | :--- |

Explain:

How does the tangential acceleration of the edge of the disk relate to the linear acceleration of the attached string that is providing the force?
$a$

## LAB QUESTION:

Describe how you could set up an experiment to measure the rotational inertia of the wheel-axle arrangement.

