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## Worksheet: Rotational Kinematics: Definition & Equations

<https://study.com/academy/lesson/rotational-kinematics-definition-equations.html>

### 1. Which of the following is NOT a rotational variable?

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- Initial angular velocity.
- Angle.
- Position.
- Angular acceleration.
- Final angular velocity.

### 2. If the angular velocity of a spinning disk is 6 radians per second, and four seconds later it is 20 radians per second, what is the angular acceleration of the disk during that time?

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- 3.5 radians per second per second.
- 2.67 radians per second.
- 2.67 radians per second per second.
- 3.5 radians per second.
- 3.5 radians per second per second.

### 3. If the initial angle of a turntable compared against an arbitrary line is 20 degrees, and half a second later it has rotated to 370 degrees, what is the angular velocity of the turntable?

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- 1400 radians per second.
- 175 radians per second.
- 740 radians per second.
- 350 degrees per second.
- 700 degrees per second.

### 4. What is the difference between kinematics and dynamics?

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- They're the same thing -- they both involve motion.
- Dynamics involves rotation, kinematics does not.
- Dynamics studies motion without forces, kinematics includes forces.
- Kinematics involves rotation, dynamics does not.
- Kinematics studies motion without forces, dynamics includes forces.

## 5. What is the angular variable that corresponds to the linear variable 'time'?

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- It's just time. There is no angular version.
- Backwards time.
- Rotational time.
- Special time.
- Angular time.