IB Physics
8.1 Group Quiz

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1. A marble goes through 34.8 rotations rolling down a ramp that is 92.0 cm long. What is the radius of the marble?

2. A grinding wheel rotating at 6130 RPM has a tangential velocity of 70.6 m/s. What is its diameter?

3. A drill goes through 67.0 radians with a final velocity of 2,350 rad/s in 0.0230 seconds. What was its initial angular velocity? What was its angular acceleration? (It's big)

4. A hard drive takes 2.10 s to slow down from 320 rot/s to 150 rot/s. How many rotations does it go through in doing this? What is its angular deceleration in rad/s/s?

5. A car with 0.940 m diameter wheels speeds up from 21.0 m/s to 32.0 m/s over a distance of 145 m. What is the angular acceleration of the wheels? What time does it take?