

Animation Worksheet: PGS 1 Reduction (Planetary Gear Reduction)

Name: _____ **Date:** _____

1. The central gear in the planetary gear system is called the _____ gear.
2. In this reduction setup, the sun gear receives power directly from the engine or motor, meaning it acts as the _____ gear.
3. In the video's example, the sun gear has a total of _____ teeth.
4. The ring gear surrounds the sun gear and features _____ teeth that mesh with the planetary pinions.
5. To allow for speed reduction, the ring gear is held _____ to provide the necessary resistance.
6. The ring gear shown in this planetary system has a total of _____ teeth.
7. The smaller gears that rotate around the sun gear and mesh with the other gears are called planetary _____.
8. The component that holds the planetary pinions and acts as the output member to drive the output shaft is called the _____.
9. To calculate the reduction gear ratio, the formula adds the teeth of the ring gear and the sun gear, then divides that sum by the teeth of the _____ gear.
10. A gear ratio of 4:1 means that for every four rotations of the sun gear, the carrier completes _____ rotation.