

Animation Worksheet: PGS 3, Reduction

Name: _____ **Date:** _____

1. In this configuration, the sun gear has _____ teeth and is held stationary.
2. The stationary sun gear acts as the _____ member, providing a stable reference point for the other gears.
3. The ring gear features 45 teeth and serves as the _____ gear that drives the system.
4. When the ring gear is driven, it causes the planetary pinions to rotate around the fixed _____ gear.
5. The _____ holds the planetary pinions together and connects them directly to the output shaft.
6. The pinions are the small gears that _____ with both the sun gear and the ring gear.
7. As the ring gear rotates, the pinions rotate around the sun gear and " _____ " along the internal teeth of the ring gear.
8. The calculated gear ratio for this reduction configuration is _____:1.
9. For every 1.33 rotations of the input ring gear, the output carrier will complete _____ rotation(s).
10. Because the output speed is slower than the input speed, this system provides a mechanical advantage in terms of _____.