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Animation Worksheet: PGS 2, Reverse Reduction

Name: _____ **Date:** _____

1. In the planetary gear set configuration shown, the sun gear has 15 teeth and acts as the _____ member.
2. The output member of this system is the ring gear, which features a total of _____ teeth.
3. The component that is held stationary and functions as the reaction member is called the _____.
4. Within this planetary configuration, the pinions serve as _____ gears to transfer motion.
5. Because the sun gear has fewer teeth than the ring gear, it is _____ than the ring gear, which facilitates its role in the gear ratio.
6. Since the carrier is held stationary and does not rotate, it provides a stable _____ for the system.
7. The pinions are planetary gears that mesh directly with both the sun gear and the _____.
8. The gear ratio for this reverse reduction configuration is calculated by dividing 45 by 15, which equals _____.
9. A 3:1 gear ratio means that for every three rotations of the input sun gear, the output ring gear rotates once in the _____ direction.
10. This configuration reduces effective output speed by a factor of 3 while simultaneously increasing the _____, making it suitable for applications requiring high force at lower speeds.