

Animation Worksheet: Timing and Balance Shafts

Name: _____ **Date:** _____

1. A typical engine timing configuration includes a _____, which controls valve timing.
2. The _____ is mounted on the camshaft and is driven by the timing belt to rotate the camshaft.
3. The timing belt ensures the camshaft rotates exactly _____ as fast as the crankshaft.
4. If a timing belt slips or breaks in an _____ engine, the valves and pistons can collide, causing catastrophic damage.
5. The _____ drive sprocket is mounted on the crankshaft and sets the base for all timing events.
6. A _____ belt controls counter-rotating shafts to reduce engine vibration.
7. Balance shafts help reduce engine _____, which stands for Noise, Vibration, and Harshness.
8. The _____ balance shaft sprocket is attached to one of the two balance shafts and helps cancel out vibrations.
9. The _____ balance shaft sprocket rotates in the opposite direction of the upper shaft.
10. A _____ uses oil pressure or a spring-and-oil-damper mechanism to keep constant pressure on the timing belt.