1. Sketch spur gears. Label and explain driven and driver gears.

2. What is the purpose of an ‘idler’ gear? Include a sketch.


4. When are rack and pinion gears very useful? Give a practical example and include an image.

5. How is a rack and pinion gear system used on a pillar drill? Include a diagram or paste an image.

6. Describe a practical application of a set of bevel gears. Sketch or image required.

7. How does gear ratio/velocity ratio benefit a cyclist?

8. Sketch a sprocket and pedal gear of a bicycle.

9. What is a worm and worm wheel? Include a labelled sketch.

10. Paste or draw a pulley system being used as a winch. Name the driver and driven pulley wheels.

11. What is the purpose of a keyed shaft, regarding a pulley wheel?

12. Draw an arrangement of pulleys that can be used to reverse the direction of rotation?

13. How can a pulley system be used to lift a heavy weight? Include a sketch.

Introduction to Gear and Pulley Systems - Knowledge Map

Click the gears for helpful links.