



## Complex Machines

### A. Choose the Correct Answer:

**1. What is a complex machine?**

- a) A machine made of one simple machine
- b) A machine that makes work harder
- c) A machine composed of two or more simple machines working together
- d) A machine that uses only human power

**2. Which of the following is an example of a complex machine?**

- a) Scissors
- b) Pulley
- c) Bicycle
- d) Inclined plane

**3. What simple machines are combined in a wheelbarrow (complex machine)?**

- a) Lever and inclined plane
- b) Wedge and pulley
- c) Wheel and axle and lever
- d) Screw and wedge


### B. Fill in the Blanks:

1. A complex machine is made by combining two or more \_\_\_\_\_ machines.
2. A bicycle is an example of a complex machine that uses \_\_\_\_\_ and \_\_\_\_\_.
3. A pair of scissors is a complex machine made of two \_\_\_\_\_ working together.

### C. Case Study:

Riya was fixing her bicycle with the help of her father.

- She noticed that the bicycle uses a combination of wheels, gears, and chains to function.
- Her father explained that the bicycle is a complex machine made up of multiple simple machines.
- The wheels reduce friction, while the gears and chains transfer force, making the bicycle move faster with less effort.

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- Riya realized that complex machines make difficult tasks easier by combining the advantages of different simple machines.

**Case Study Questions:**

1. What complex machine was Riya fixing with her father?
2. Which simple machines are used in the bicycle?
3. How do the wheels help reduce effort?
4. Why are complex machines more efficient than simple machines?

**D. Short Answer Questions:**

1. What is a complex machine?
2. Give two examples of complex machines.
3. Why are complex machines useful in daily life?

**E. Long Answer Questions:**

1. Explain how a bicycle is a complex machine by describing the simple machines it contains.
  2. What are the advantages of using complex machines over simple machines? Give examples.
  3. Describe how a sewing machine works as a complex machine by combining multiple simple machines.
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