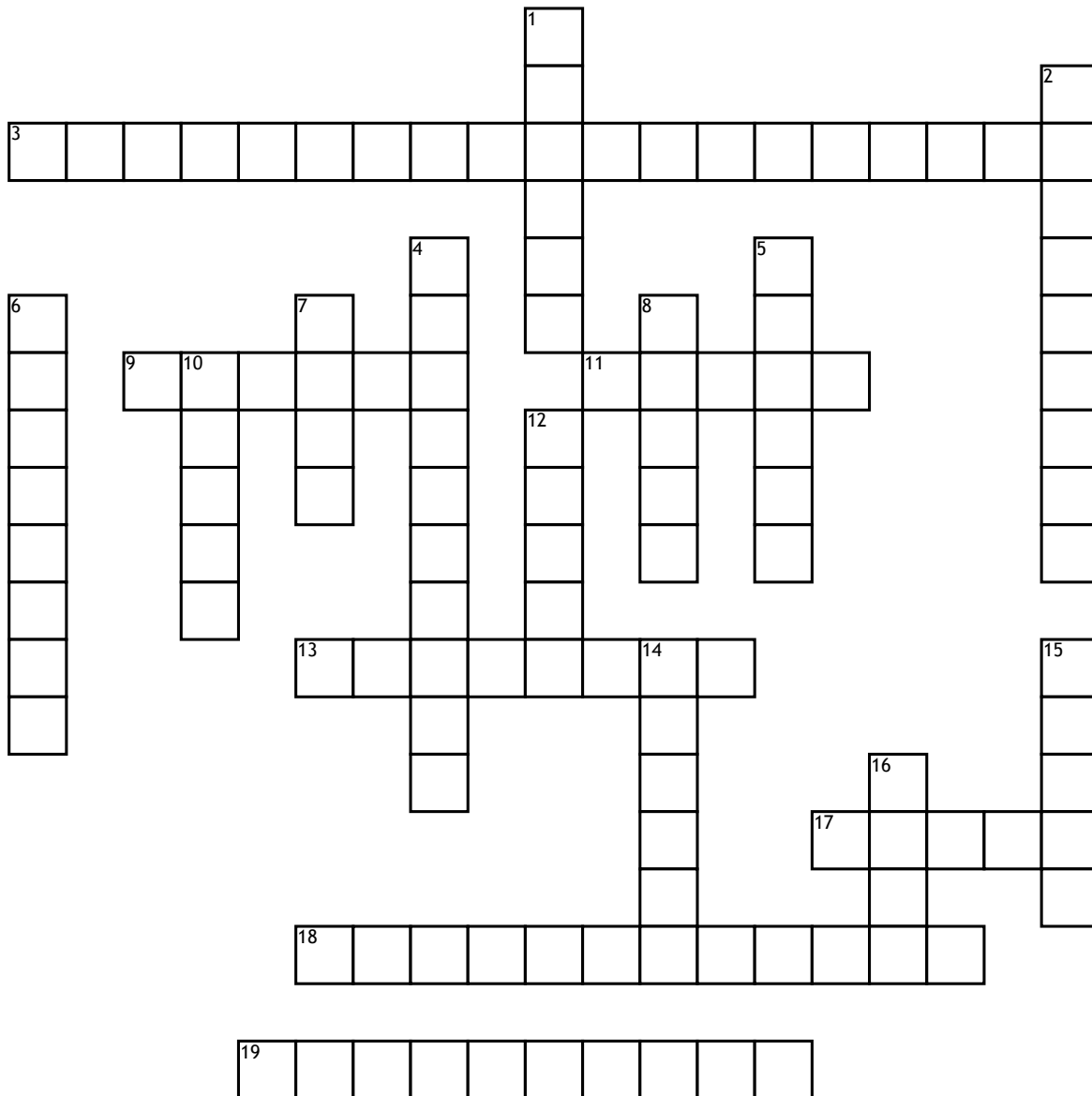


Name: _____

SYSTEMS IN ACTION



Across

3. The ratio of the force produced by a machine to the force applied to it

9. The energy that is spent to accomplish a task

11. A simple machine consisting mainly of a beam

13. What occurs when two solid surfaces rub together

17. This is often put under something heavy to help move it

18. The benefit achieved when a machine or system is used successfully

19. A machine or system that works very well to accomplish its goal is said to have a high degree of _____

Down

1. The main action in operating this simple machine is pulling

2. One of the working parts of a system or machine

4. Making something run without the need for outside force

5. The work performed by machines is not possible without this

6. The technology applied to the design and operation of robots

7. The action of applying a force to an object to move it

8. These are round toothed mechanisms often found in clocks, watches and motors

10. The push or pull action applied to an object in order to move it

12. Energy, work or power used to drive machine

14. The result of using energy, work or power to make a machine operate

15. These are important parts of a system with wheels

16. This is often the result of friction