

Name \_\_\_\_\_

Date \_\_\_\_\_

**Chapter 3 Review Sheet**  
**Test 12/18**

**Define Vocabulary**

Work:

Joule:

Power:

Watt:

Machine:

Simple Machine:

Inclined Plane:

Examples of an Inclined Plane:

Wedge:

Examples of a Wedge:

Screw:

Examples of a Screw:

Lever:

Examples of a Lever:

Fulcrum:

Pulley:

Examples of a Pulley:

Wheel and Axle:

Example of a Wheel and Axle:

Compound Machine:

Examples of Compound Machines:

**Work**

1. Draw the work triangle.

2. What is the unit for work?

3. What is the formula for work?

**Solve**

4. You must exert a force of 4.5 N on a book to slide it across a table. If you do 2.7 J of work in the process, how far have you moved the book?

Formula	
Substitution	
Final Answer	

5. A child pulls a sled up a snow-covered hill. The child does 405 J of work on the sled. If the child walks 15 m up the hill, how large of a force must the child exert?

Formula	
Substitution	
Final Answer	

6. If 16,700 J of work is done to shoot a cannonball down a 3.05 m barrel, then how much force is applied to the person to fire them out the cannon?

Formula	
Substitution	
Final Answer	

7. An elephant pushes with 2000 N on a load of trees. It then pushes these trees for 150 m. How much work did the elephant do?

Formula	
Substitution	
Final Answer	

**Power**

8. Draw the Power triangle.
9. What is the formula to calculate power?
10. What is the metric unit for power?

**Solve**

11. An 190,000 W engine can accelerate from rest to a top speed in 9 s. How much work did the engine do?

Formula	
Substitution	
Final Answer	

12. If a runner exerts 350 J of work to make 125 W of power, then how long did it take the runner to do the work?

Formula	
Substitution	
Final Answer	

13. A horse performs 15000 joules of work pulling a wagon for 20 seconds. What is the horse's power?

Formula	
Substitution	
Final Answer	

**Two Step Word Problems**

14. A student who weighs 500 Newtons climbed the stairs from the first floor to the third floor, 15 meters above, in 20 seconds. How much power did the student generate?

Formula	
Substitution	
Final Answer	

15. A box is pushed across the floor for a distance of 5 meters with a force of 50 Newtons in 5 seconds. How much power was used?

Formula	
Substitution	
Final Answer	

16. If it takes 50 seconds to lift 10 Newtons of books to a height of 7 meters, calculate the power required.

Formula	
Substitution	
Final Answer	

17. A cart is pushed with a 75 N force a distance of 3.6m in 1.3 seconds. Calculate the power required.

Formula	
Substitution	
Final Answer	

Simple Machines:

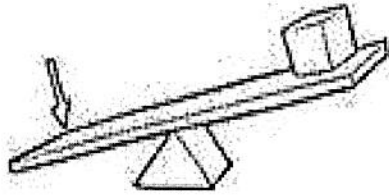
Label the Simple Machines below. (Pulley, Inclined Plane, Lever, Wheel and Axle, Screw and Wedge)



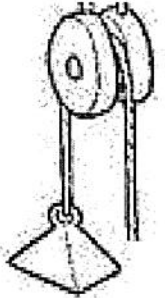
18. \_\_\_\_\_



19. \_\_\_\_\_



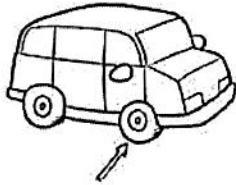
20. \_\_\_\_\_



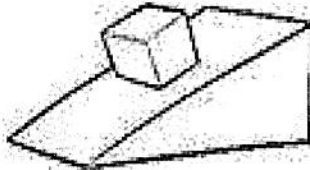
21. \_\_\_\_\_



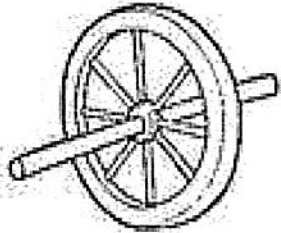
22. \_\_\_\_\_



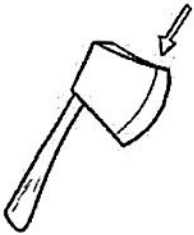
23. \_\_\_\_\_



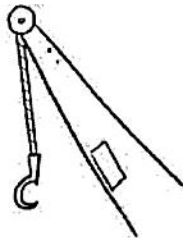
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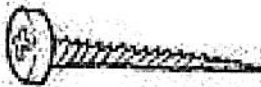
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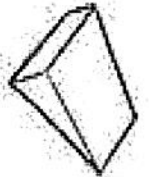
26. \_\_\_\_\_



27. \_\_\_\_\_



28. \_\_\_\_\_



29. \_\_\_\_\_

Write the simple machines that make up the compound machine.

30.



31.



32.



