4-Minute Drill

1. Work
2. Work done pulling at an angle Θ, relative to direction of motion
3. Power
4. 1kWh, in Joules
5. Spring force
6. Gravitational Potential Energy
7. Spring Potential Energy
8. Kinetic Energy
9. Work-Energy Theorem
10. Law of Conservation of Energy (no friction, no outside forces)
11. Law of Conservation of Energy (with friction or outside forces)
12. % Efficiency

Energy Conservation Drill

13. Change in speed of an object with mass **m** after falling a distance **h**
14. Change in speed of an object with mass **m** after flying upward a distance **h**
15. Stopping distance of a car with mass **m**, speed **v**, and braking force $\mathbf{F_{Fr}}$, on a level surface.
16. Compression distance **x** of a spring with constant **k** after stopping an object with mass m and speed **v**
17. Work done by friction when an object of mass **m** slides down a hill at a constant speed, descending a height of **h** in the process
18. Speed of an object with mass **m** just after being launched directly upward from rest by a spring, if the spring has a constant **k** and was compressed a distance **x**
19. Height gained by the object in the previous question, before returning to Earth
20. Net work done <u>on</u> a car of mass **m** that starts from rest, drives up a hill of height **h**, and stops.
21. Net work done <u>by</u> the car in the previous question.