

## Summary of in-class exercises

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- Day 1** Estimate the average hydroelectric energy per day that could be extracted from rainwater flowing down the gutters of a house in Corvallis.
- Day 2** Calculate the rate that sunlight energy is being emitted from the Sun.
- Day 3** Estimate the rate that electrical energy is produced by a wind farm.
- Day 4** Use the integral of  $F \cdot dl$  to calculate transfer of energy from a spring to a toy car.
- Day 5** Fill out a chart of  $\Delta U$ ,  $Q$ ,  $W$  and calculate heat engine efficiency.
- Day 6** Check if a function satisfies a partial differential equation.
- Day 7** Make a frequency level diagram for a guitar string.
- Day 8** Double slit interference, calculate  $d$ .