## Thermal Physics Cheat Sheet

## Thermodynamics

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Temperature & Boltzmann Factor<sup>4</sup>

Maxwell-Boltzmann Distribution<sup>5</sup>

Pressure & Ideal Gas Law<sup>6</sup>

Molecular Flux & Effusion<sup>7</sup>

Mean Free Path & Collisions<sup>8</sup>

 $\mathbf{Energy}^{\scriptscriptstyle{11}}$ 

Adiabatic Processes<sup>12</sup>

Heat Engine 2<sup>nd</sup> Law<sup>13</sup>

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Thermodynamic Potentials<sup>16</sup>

Maxwell Relations<sup>16</sup>

Work Generalization<sup>17</sup>

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Classical Statistical Mechanics

Equipartition<sup>19</sup>

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Statistical Mechanics on Ideal Gases<sup>21</sup>

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Bose-Einstein Distribution<sup>29</sup>

Bose Gases<sup>30</sup>

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Fermi Gases<sup>30</sup>

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