MCAT Units & Constants
To Get You Started

Base Units in SI System
the kilogram (kg) for mass
the meter (m) for distance
the kelvin (K) for temperature
the mole (mol) for the amount of a substance
the ampere (A) for electric current
the second (s) for time
the candela (cd) for luminous intensity

Constants & Formulas
1 Watt/ = 1J/S = kg m² / s³
1 mL = 1cm³ = 1000L = 1m³
1 atm = 760 torr = 101.3 kPa
1 Pa = 1 N/m² = 1 kg/ms²
1 J = 1 N m = 1 kg m² / s²
1 hour = 3600 seconds

Hz = 1/ sec
Speed = m/s
Acc = m / s²
F = C/V
1 C= 1 amp sec
c = J/ g°C
1V= kg m² / s³ A
1A= kg m² / s³ A²
1 N= 1 kg m / s²

Approach:
1. Have I seen a problem like this before? Where?
2. How would I restate the problem in my own words?
3. What information here is most crucial and why?
4. Can I draw a picture to represent the information?
5. Is there anything else I can do to help me better understand problem?

<table>
<thead>
<tr>
<th>Name</th>
<th>Symbol</th>
<th>constant</th>
<th>units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed of Light</td>
<td>c</td>
<td>3.000 x 10⁸</td>
<td>m/s</td>
</tr>
<tr>
<td>Gas Constant</td>
<td>R</td>
<td>8.314</td>
<td></td>
</tr>
<tr>
<td>Avogadro's #</td>
<td>Nₐ or L</td>
<td>6.022 x 10²³</td>
<td>1/mol</td>
</tr>
<tr>
<td>Planck's constant</td>
<td>h</td>
<td>6.626 x 10⁻³⁴</td>
<td>J*s</td>
</tr>
<tr>
<td>Gravitational</td>
<td>G</td>
<td>6.673 x 10⁻¹¹</td>
<td>Nm² / kg²</td>
</tr>
</tbody>
</table>

Assess:
1. Do I have the correct units?
2. Does my answer make sense?
3. What was the hardest thing about this problem?
4. Was there a simpler way I could have solved this problem?