For each RBC Indices question:

- Calculate the MCV, MCH and MCHC using the formulas and data given. Drop the units for RBC, HGB and HCT when calculating and report RBC indices to the nearest tenth, including units.

\[
\text{MCV} = \frac{\text{HCT} \times 10}{\text{RBC}} \quad \text{MCH} = \frac{\text{HGB} \times 10}{\text{RBC}} \quad \text{MCHC} = \frac{\text{HGB} \times 100}{\text{HCT}}
\]

- Describe the red cells as to size using the MCV (normocytic, microcytic or macrocytic) and hemoglobin content using the MCHC (normochromic, hypochromic or spherocytes). MCH varies with both size and hemoglobin content so not a very useful indice.

<table>
<thead>
<tr>
<th>MCV Range</th>
<th>RBC Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>82.0-98.0 fl</td>
<td>Normocytic RBCs</td>
</tr>
<tr>
<td>&lt; 82.0 fl</td>
<td>Microcytic RBCs</td>
</tr>
<tr>
<td>&gt; 98.0 fl</td>
<td>Macrocytic RBCs</td>
</tr>
<tr>
<td>32.0-36.0 %</td>
<td>Normochromic RBCs</td>
</tr>
<tr>
<td>&lt; 32.0 %</td>
<td>Hypochromic RBCs</td>
</tr>
<tr>
<td>&gt; 36.0 %</td>
<td>Spherocytes</td>
</tr>
</tbody>
</table>

Select the correct responses.

1. Calculate the RBC indices for Patient A: RBC count 4.50 million/cmm, Hgb 13.5 g/dl, Hct 40.0 %

Choose the correct RBC indices and RBC description:
- MCV 88.9 fl, MCH 30.0 pg, MCHC 33.8 %
- MCV 89.0 fl, MCH 30.0 pg, MCHC 33.75 %
- MCV 88.9 fl, MCH 30 pg, MCHC 33.8 %
- Normocytic and normochromic red cells
- Macrocytic and normochromic red cells
- Microcytic and hypochromic red cells

2. Calculate the RBC indices for patient B: RBC count 2.72 million/uL, Hgb 10.1 g/dL, Hct 30.0 %

Choose the correct RBC indices and RBC description:
- MCV 110.29 fl, MCH 37.1 %, MCHC 33.7 pg
- MCV 110.3 fl, MCH 37.1 pg, MCHC 33.7 %
- Normocytic and normochromic red cells
- Macrocytic and normochromic red cells
- Microcytic and hypochromic red cells

3. Calculate the RBC indices for patient C: RBC count 7.30 M/ul, Hgb 13.9 g/dL, Hct 49.0 %

Choose the correct RBC indices and RBC description:
- MCV 67 fl, MCH 19 pg, MCHC 28%
- MCV 67.1 fl, MCH 19.0 pg, MCHC 28.4 %
- Normocytic and normochromic red cells
- Macrocytic and normochromic red cells
- Microcytic and hypochromic red cells

4. Calculate the RBC indices for patient D: RBC count 3.79 x 10^6/cmm, Hgb 11.6 g/dl, Hct 32.0 %

Choose the correct RBC indices and RBC description:
- MCV 84.4, MCH 30.6, MCHC 36.3
- MCV 84.0 fl, MCH 30.61 pg, MCHC 36.25 %
- Normocytic and normochromic red cells
- Normocytic and spherocytes
- Normocytic and hyperchromic red cells