Celestial Coordinates

I. RIGHT ASCENSION AND DECLINATION
A way to locate a point on the sky is to use its right ascension and declination:

DECLINATION (Dec or d): Measures the angle north or south of the celestial equator ± 0° to 90°
Celestial Latitude ... parallels of declination
DEGREES, ARCMinutes, ARCSeconds: 0° 0' 0" to 90° 0' 0"

RIGHT ASCENSION (RA or a): Measures the angle east of the prime meridian from 0h to 24h
Celestial Longitude ... great circles of right ascension
HOURS, MINUTES, SECONDS: 0h 0m 0s to 23h 59m 59s

On your celestial globe
*identify the celestial equator and find the hours of right ascension markings
*identify the prime meridian and find the degrees of declination markings
Using the RA and Dec markings, identify the stars located at the following coordinates. Use the Peterson Field Guide to confirm these and find the Bayer designation.

<table>
<thead>
<tr>
<th>RA</th>
<th>DEC</th>
<th>STAR NAME</th>
<th>CONSTELLATION</th>
<th>BAYER DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>6h 45m</td>
<td>-16° 43'</td>
<td>Sirius</td>
<td>Canis Major</td>
<td>β CMa</td>
</tr>
<tr>
<td>18h 37m</td>
<td>+38° 47'</td>
<td>Vega</td>
<td>Lyra</td>
<td>α Lyr</td>
</tr>
<tr>
<td>5h 15m</td>
<td>-8° 12'</td>
<td>Rigel</td>
<td>Orion</td>
<td>β Ori</td>
</tr>
<tr>
<td>7h 39m</td>
<td>+5° 14'</td>
<td>Procyon</td>
<td>Canis Minor</td>
<td>α CMi</td>
</tr>
<tr>
<td>6h 24m</td>
<td>-52° 41'</td>
<td>Canopus</td>
<td>Carina</td>
<td>α Car</td>
</tr>
</tbody>
</table>
On these charts from the Field Guide, use colored pencils to highlight and label the
• lines of 0°, 6°, 12° and 18°
• circles of 0°, +20°, +50°, -20°, and -50°.

Also highlight and label the stars listed on the flip side of this sheet.

In what constellation is the point 21°, +20°?

**Velpecula**

(Use your field guide to read the numbers since these are very small!)