Mohs Hardness Scale

One of the most useful properties used for identification of a mineral is its hardness. The Mohs hardness scale measures a mineral's hardness by means of a simple scratch test.

Name the mineral that belongs in each step of the Mohs Hardness Scale chart.

<table>
<thead>
<tr>
<th>Hardness</th>
<th>Mineral</th>
<th>Common Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Fingernail will scratch it.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Fingernail will not scratch it; a copper penny will.</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Knife blade or window glass will scratch it.</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Will scratch a steel knife or window glass.</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Will scratch all common materials.</td>
</tr>
</tbody>
</table>

WORD BANK

Talc   diamond     Gypsum
Calcite Topaz   Fluorite
Apatite Feldspar/Orthoclase Corundum Quartz

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One can identify many minerals by carefully observing their physical characteristics. Some of these characteristics are:

- **Hardness** — This is determined with a scratch test.
- **Color** — Color depends on the substances that make up the crystals. Varies greatly.
- **Luster** — This refers to how light reflects off the mineral.

Enough information has been given to you here to help you find the unknown minerals and fill in the chart.

### Hardness Scale

<table>
<thead>
<tr>
<th>Hardness</th>
<th>Mineral</th>
<th>Common Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Talc</td>
<td>Fingernail will scratch it.</td>
</tr>
<tr>
<td>2</td>
<td>Gypsum/Kaolinite</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Mica/Calcite</td>
<td>A copper penny will scratch it.</td>
</tr>
<tr>
<td>4</td>
<td>Fluorite</td>
<td>Knife blade or window glass will scratch it.</td>
</tr>
<tr>
<td>5</td>
<td>Apatite/Hornblende</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Feldspar</td>
<td>Will scratch a steel knife or window glass.</td>
</tr>
<tr>
<td>7</td>
<td>Quartz</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Topaz</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Corundum</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Diamond</td>
<td>Will scratch all common materials.</td>
</tr>
</tbody>
</table>

### Color

<table>
<thead>
<tr>
<th>Color</th>
<th>Mineral</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Quartz, Feldspar, Calcite, Kaolinite, Talc</td>
</tr>
<tr>
<td>Yellow</td>
<td>Quartz, Kaolinite</td>
</tr>
<tr>
<td>Black</td>
<td>Hornblende, Mica</td>
</tr>
<tr>
<td>Gray</td>
<td>Feldspar, Gypsum</td>
</tr>
<tr>
<td>Colorless</td>
<td>Quartz, Calcite, Gypsum</td>
</tr>
</tbody>
</table>

### Luster

<table>
<thead>
<tr>
<th>Luster</th>
<th>Mineral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glassy</td>
<td>Quartz, Feldspar, Hornblende</td>
</tr>
<tr>
<td>Pearly</td>
<td>Mica, Gypsum, Talc</td>
</tr>
<tr>
<td>Dull</td>
<td>Kaolinite</td>
</tr>
</tbody>
</table>

**THE UNKNOWN MINERALS —**

<table>
<thead>
<tr>
<th>Hardness</th>
<th>Color</th>
<th>Luster</th>
<th>Mineral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will scratch a steel knife or window glass.</td>
<td>yellow</td>
<td>glassy</td>
<td></td>
</tr>
<tr>
<td>Will scratch a steel knife or window glass.</td>
<td>gray</td>
<td>glassy</td>
<td></td>
</tr>
<tr>
<td>A copper penny will scratch it.</td>
<td>black</td>
<td>pearly</td>
<td></td>
</tr>
<tr>
<td>Fingernail will scratch it.</td>
<td>white</td>
<td>pearly</td>
<td></td>
</tr>
<tr>
<td>Knife blade or window glass will scratch it.</td>
<td>black</td>
<td>glassy</td>
<td></td>
</tr>
</tbody>
</table>