I. Natural Numbers (p.19): \( \{1, 2, 3, \ldots \} \)

II. Whole Numbers (p.20): \( \{0, 1, 2, 3, \ldots \} \)

III. Integers (p.20): \( \{0, \pm 1, \pm 2, \pm 3, \ldots \} \)

IV. Rational Numbers (p.20): set of “fractions”

\[
\left\{ \frac{p}{q} \mid p \text{ & } q \text{ are Integers, } q \neq 0 \right\}
\]

OR, as well as...

\[
\left\{ x \mid x \text{ is a terminating or repeating decimal} \right\}
\]

\( e.g., \) \( \frac{3}{5} = 0.6 \), \( 1 \frac{2}{3} = 1.\overline{6} \)
V. Irrational Numbers (p.21):
\[ \{ x \mid x \text{ is a non-terminating and non-repeating decimal} \} \]
e.g., __, __, __, __, __________

VI. Real Numbers (p.21):
\[ \{ x \mid x \text{ is any decimal} \} \]
i.e., either a rational # or an irrational #

VII. Summary (p.21): see Figure 7

VIII. Examples (pp.25-26): Exercises #32, 34, 38, 40, 72-88 (even)

HW: pp.25-26 / Exercises #31-59 (odd), 71-87 (odd)
Read pp.27-35 (section 1.4)
In problems 71-78, place a ✓ in the box if the given number belongs to that set.

<table>
<thead>
<tr>
<th></th>
<th>Natural</th>
<th>Whole</th>
<th>Integer</th>
<th>Rational</th>
<th>Irrational</th>
<th>Real</th>
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<tbody>
<tr>
<td>72. 0</td>
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<tr>
<td>74. √2</td>
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<td></td>
<td></td>
<td>✓</td>
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<td>76. 4</td>
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<td>✓</td>
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<td>78. 6.45</td>
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<td></td>
<td>✓</td>
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Quiz #01 (Course Policies): Monday, Aug.31st