1. Complete the chart with each equivalent mixed number or improper fraction.

<table>
<thead>
<tr>
<th>Mixed Number or Whole Number</th>
<th>Improper Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{5}{7} )</td>
<td>( \frac{33}{7} )</td>
</tr>
<tr>
<td>( \frac{16}{4} )</td>
<td>( \frac{130}{8} )</td>
</tr>
<tr>
<td>( \frac{11}{13} )</td>
<td>( \frac{162}{13} )</td>
</tr>
<tr>
<td>( \frac{18}{5} )</td>
<td>( \frac{90}{5} )</td>
</tr>
</tbody>
</table>

\( \frac{41 \cdot 7 + 5}{8} = \frac{28 + 5}{8} = \frac{33}{8} \)

\( 8 \sqrt{\frac{130}{0.00}} \)

\( 8 \sqrt{\frac{48}{16}} \)

\( 8 \sqrt{\frac{40}{16}} \)

2. Find the equivalent fraction of \( \frac{5}{8} \) with a denominator of 32.

\( \frac{5 \cdot 4}{8 \cdot 4} = \frac{20}{32} \)

3. Find the equivalent fraction of \( \frac{20}{44} \) with a denominator of 11.

\( \frac{20 \div 4}{44 \div 4} = \frac{5}{11} \)

4. Find the equivalent fraction of \( \frac{7}{15} \) with the numerator of 91.

\( \frac{7 \cdot 13}{15 \cdot 13} = \frac{91}{195} \)

5. Find the equivalent fraction of \( \frac{10}{45} \) with the numerator of 2.

\( \frac{10 \div 5}{45 \div 5} = \frac{2}{9} \)

6. Find the equivalent fraction for 17 with a denominator of 3.

\( \frac{17 \cdot 3}{1 \cdot 3} = \frac{51}{3} \)

7. Write \( \frac{80}{128} \) in simplest form.

\( \frac{80}{128} = \frac{5}{8} \)

8. Write the fraction in simplest form.

a. \( \frac{9 \div 3}{15 \div 3} = \frac{3}{5} \)

b. \( \frac{63 \div 3}{210 \div 3} = \frac{3}{5} \)

c. \( \frac{40 \div 2}{60 \div 2} = \frac{2}{3} \)

d. \( \frac{21 \div 3}{84 \div 2} = \frac{1}{4} \)
9. Perform the indicated operation. Express simplified fractions as a mixed number if necessary.

a. \( \frac{3}{5} \cdot \frac{7}{10} = \frac{21}{50} \)

b. \( \frac{7}{15} \cdot \left( \frac{9}{21} \right) = \frac{7}{15} \cdot \frac{3}{2} = \frac{21}{30} = \frac{7}{10} \)

c. \( \frac{12}{15} \div \left( \frac{2}{1} \right) = \frac{12}{15} \cdot \frac{1}{2} = \frac{6}{15} = \frac{2}{5} \)

d. \( \frac{7}{20} + \frac{19}{20} = \frac{26}{20} = 1 \frac{6}{20} = 1 \frac{3}{10} \)

e. \( \frac{45}{2} - \frac{6}{2} = \frac{44}{2} - \frac{6}{2} = 22 - 3 = 19 \)

f. \( \frac{71}{7} - 36 \frac{3}{4} = 10 \frac{3}{7} - 36 \frac{3}{4} = 10 - 36 = -26 \frac{3}{4} \)

g. \( 96.74 + 74.909 = 171.649 \)

h. \( 10.2 - 9.25 = 0.95 \)

i. \( 1.08(2.5) = 5.40 = 2.7 \)

10. Convert between percents, decimals, and fractions to complete the chart. Write any repeating decimals with as few digits as possible.

<table>
<thead>
<tr>
<th>Percent</th>
<th>Decimal</th>
<th>Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5%</td>
<td>0.025</td>
<td>( \frac{25}{1000} = \frac{1}{40} )</td>
</tr>
<tr>
<td>60%</td>
<td>0.6</td>
<td>( \frac{3}{5} )</td>
</tr>
<tr>
<td>33 1/3%</td>
<td>0.3</td>
<td>( \frac{1}{3} )</td>
</tr>
<tr>
<td>62.5%</td>
<td>0.625</td>
<td>( \frac{625}{1000} = \frac{5}{8} )</td>
</tr>
<tr>
<td>125%</td>
<td>1.25</td>
<td>( \frac{25}{100} = \frac{1}{4} )</td>
</tr>
</tbody>
</table>
11. Classify the real number as a natural number, whole number, integer, rational number, and/or irrational number. The number may belong to more than one set.

<table>
<thead>
<tr>
<th></th>
<th>Natural Number</th>
<th>Whole Number</th>
<th>Integer</th>
<th>Rational Number</th>
<th>Irrational Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-\sqrt{11}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.5\bar{4}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

12. Plot the set of numbers on the number line. \( \left\{ -3, -\frac{5}{2}, 1, \frac{15}{2}, -\frac{7}{4} \right\} \)

13. Enter the correct symbol, <, >, or =, between the numbers to make a true statement.

a. \(-96 \leq 17\)  
   b. \(-\frac{2}{3} < \frac{2}{5}\)  
   c. \(0.1 = \frac{1}{10}\)  
   d. \(|-32| > -32\)

14. Find the opposite of the real numbers.

a. \(-29\)  
   b. \(-1.8\)

15. Find the absolute value.

a. \(|29|\)  
   b. \(|-1.8|\)

16. Write a mathematical expression for the word phrase.

a. Seventeen is greater than fifteen.  
   \[ 17 > 15 \]

b. Thirty-eight is less than or equal to fifty-nine.  
   \[ 38 \leq 59 \]

c. Twenty-three is greater than or equal to fourteen.  
   \[ 23 \geq 14 \]

d. Three is at least one.  
   \[ 3 \geq 1 \]