1. Simplify.
   a. \(7(-3) = -21\)
   b. \(\frac{9}{24} \cdot \left(\frac{8}{14}\right)^2\)
      \(= \frac{1}{14}\)
      \(= 0.0714\)
   c. \(-0.06 ÷ (-0.3) = 0.2\)
   d. \(6^3 = 216\)
   e. \((0.02)^3 = 0.0000008\)
   f. \(0^4 = 0\)
   g. \(1^3 = 1\)
   h. \((-1)^3 = -1\)
   i. \(-\left(-\frac{2}{5}\right)^2\)
      \(= -\left(-\frac{2}{5}\right) \cdot \left(-\frac{2}{5}\right)\)
      \(= -\frac{4}{25}\)
   j. \(21 ÷ 8 \cdot 5 - 17 = 21 \cdot 40 ÷ 17\)
      \(= 61 - 17\)
      \(= 44\)
   k. \(8^2 - 10^2 ÷ 2^2 = 64 - 100 ÷ 4\)
      \(= 64 - 25\)
      \(= 39\)
   l. \(\frac{|4 - 13| + 7}{-7^2 - 5(3)} = \frac{9 + 7}{-49 - 15}\)
      \(= 4.4\)
      \(= 16\)
      \(= \frac{16}{-44} = -\frac{4}{1}\)
   m. \(24 ÷ 6.4 = 4\)
      \(= \checkmark\)
n. \(4^2 - 3(1 - 5)\) \\
\[\begin{align*}
&= 16 - 3(-4) \\
&= 16 + 12 \\
&= 28 \\
\end{align*}\]

o. \((8^2 - 10^2) \div 2^2\) \\
\[\begin{align*}
&= (64 - 100) \div 4 \\
&= (-36) \div 4 \\
&= -9 \\
\end{align*}\]

2. Write a mathematical expression for the word phrase.

<table>
<thead>
<tr>
<th>28% of 30</th>
<th>0.128 (30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The product of 6 and -20</td>
<td>6 ((-20))</td>
</tr>
<tr>
<td>4 more than twice 0.28</td>
<td>2(0.28) + 4</td>
</tr>
<tr>
<td>17 decreased by 10, times (\frac{8}{9})</td>
<td>((17-10) \frac{8}{9})</td>
</tr>
<tr>
<td>20, decreased by 14 times (\frac{8}{9})</td>
<td>(20 - 14 \left(\frac{8}{9}\right))</td>
</tr>
<tr>
<td>18 less than the product of 0.8 and the sum of 17 and 3</td>
<td>0.8(17 + 3) - 18</td>
</tr>
<tr>
<td>The quotient of 45 and -6</td>
<td>(-\frac{45}{6})</td>
</tr>
</tbody>
</table>

Apply what you know. Show your steps for solving the following problems. Express your correctly labeled solution in a complete sentence.

3. \(10 \frac{3}{16}\) inches is cut from a 2-foot piece of paper. How long is the remaining piece?

\[\begin{align*}
24 - 10 \frac{3}{16} &= 13 \frac{13}{16} \\
13 \frac{13}{16} \text{ inches is remaining} \\
\end{align*}\]

4. A recipe for 4 people calls for \(1 \frac{1}{3}\) cups of rice. How much rice is needed if you adjust the recipe for 10 people?

\[\begin{align*}
1 \frac{1}{3} \div 4 &= \frac{4}{3} \div 4 = \frac{4}{3} \cdot \frac{1}{4} = \frac{1}{3} \text{ cup per person} \\
\frac{1}{3} \cdot 10 &= \frac{10}{3} = 3 \frac{1}{3} \\
3 \frac{1}{3} \text{ cups of rice are needed for 10 people} \\
\end{align*}\]