1. Estimate. Then, solve using the standard algorithm. You may draw an area model if it helps you.
   a. \(1.21 \times 14 = \underline{1} \times \underline{10} = 10\)
   
   \[
   \begin{array}{c}
   \hline
   1.21 \\
   \times 14 \\
   \hline
   484 \\
   +1210 \\
   \hline
   1694
   \end{array}
   \]

   b. \(2.45 \times 305 = \underline{2} \times \underline{300} = 700\)

2. Estimate. Then, solve using the standard algorithm. Use a separate sheet to draw the area model if it helps you.
   a. \(1.23 \times 12 = \underline{1} \times \underline{10} = 10\)

   \[
   \begin{array}{c}
   \hline
   1.23 \\
   \times 12 \\
   \hline
   246 \\
   +1230 \\
   \hline
   1476
   \end{array}
   \]

   b. \(1.3 \times 26 = \underline{1} \times \underline{30} = 30\)

   \[
   \begin{array}{c}
   \hline
   1.3 \\
   \times 26 \\
   \hline
   78 \\
   +260 \\
   \hline
   338
   \end{array}
   \]

   c. \(0.23 \times 14 = \underline{0} \times \underline{14} = 0\)

   \[
   \begin{array}{c}
   \hline
   0.23 \\
   \times 14 \\
   \hline
   280 \\
   \hline
   3.22
   \end{array}
   \]

   d. \(0.45 \times 26 = \underline{0.5} \times \underline{30} = 15\)

   \[
   \begin{array}{c}
   \hline
   0.45 \\
   \times 26 \\
   \hline
   220 \\
   +130 \\
   \hline
   1170
   \end{array}
   \]

Lesson 12: Reason about the product of a whole number and a decimal with hundredths using place value understanding and estimation.
Lesson 12 Problem Set

5.2

e. $7.06 \times 28 = \frac{7}{1} \times 30 = 210$

\[
\begin{array}{c}
7.06 \\
\times 28 \\
\hline
197.08
\end{array}
\]

f. $6.32 \times 223 = \frac{6}{1} \times 200 = 1200$

\[
\begin{array}{c}
6.32 \\
\times 223 \\
\hline
1409.36
\end{array}
\]

g. $7.06 \times 208 = \frac{7}{1} \times 200 = 14000$

\[
\begin{array}{c}
7.06 \\
\times 208 \\
\hline
1408.48
\end{array}
\]

h. $151.46 \times 555 = \frac{1}{200} \times 600 = 120000$

\[
\begin{array}{c}
151.46 \\
\times 555 \\
\hline
8400030
\end{array}
\]

3. Denise walks on the beach every afternoon. In the month of July, she walked 3.45 miles each day. How far did Denise walk during the month of July?

\[
\begin{array}{c}
\frac{3.45}{31}
\end{array}
\]

\[
\begin{array}{c}
= 106.95
\end{array}
\]

She walked 106.95 miles in July.

4. A gallon of gas costs $4.34. Greg puts 12 gallons of gas in his car. He has a 50-dollar bill. Tell how much money Greg will have left, or how much more money he will need. Show all your calculations.

\[
\begin{array}{c}
4.34 \\
\times 12 \\
\hline
52.08
\end{array}
\]

\[
\begin{array}{c}
52.08 \\
\times 12 \\
\hline
624.96
\end{array}
\]

\[
\begin{array}{c}
52.08 \\
\times 12 \\
\hline
624.96
\end{array}
\]

He will need $2.08 more for gas.

5. Seth drinks a glass of orange juice every day that contains 0.6 grams of Vitamin C. He eats a serving of strawberries for snack after school every day that contains 0.35 grams of Vitamin C. How many grams of Vitamin C does Seth consume in 3 weeks?

\[
\frac{0.95}{121} \\
\times 3 \text{ weeks} = 21 \text{ days}
\]

He consumed 19.95g in 21 days.

\[
\frac{0.95}{21} \\
\times 21 \\
\hline
19.95
\]

\[
\begin{array}{c}
0.95 \\
\times 21 \\
\hline
19.95
\end{array}
\]

Lesson 12: Reason about the product of a whole number and a decimal with hundredths using place value understanding and estimation.