1. Maria solved the following division problem by drawing an area model.
   a. Look at the area model. What division problem did Maria solve?

   $\begin{array}{c|c|c}
   \text{10} & \text{8} \\
   \hline
   \text{3} & \text{30} & \text{24} \\
   \end{array}$

   $54 \div 3 = 18$

   b. Show a number bond to represent Maria's area model. Start with the total and then show how the total is split into two parts. Below the two parts, represent the total length using the distributive property and then solve.

   $\begin{array}{c}
   54 \\
   \hline
   30 & 24 \\
   \hline
   \end{array}$

   $(30 \div 3) + (24 \div 3) = 10 + 8 = 18$

2. Solve $42 \div 3$ using an area model. Draw a number bond and use the distributive property to solve for the unknown length.

   $\begin{array}{c|c|c}
   \text{10} & \text{4} \\
   \hline
   \text{3} & \text{30} & \text{12} \\
   \end{array}$

   $\begin{array}{c}
   42 \\
   \hline
   30 & 12 \\
   \hline
   \end{array}$

   $(30 \div 3) + (12 \div 3) = 10 + 4 = 14$
3. Solve $60 \div 4$ using an area model. Draw a number bond to show how you partitioned the area, and represent the division with a written method.

```
  60
/    /
40   20
\   /
 40 \ 20
```

$$= 10 + \frac{20}{4}$$

$$= 10 + 5$$

$$= 15$$

4. Solve $72 \div 4$ using an area model. Explain, using words, pictures, or numbers, the connection of the distributive property to the area model.

```
  72
/    /
40   32
\   /
 40 \ 32
```

$$= (40 \div 4) + (32 \div 4)$$

$$= 10 + 8$$

$$= 18$$

We use the area model to show how we can break apart a whole into pieces that make it easier to divide. The distributive property shows how the whole is broken apart.

5. Solve $96 \div 6$ using an area model and the standard algorithm.

```
  96
/  /
60   36
\  /
 60 \ 36
```

$$6 \div 96$$

$$-6 \div 36$$

$$-36 \div 0$$