Name _____

1

Erika did multiplication like this.

$$\begin{array}{r} 24 \\ \times\ 5 \\ \hline 20 \\ \underline{100} \\ 120 \end{array}$$

Can you explain what she did?

Try Erika's method for these.

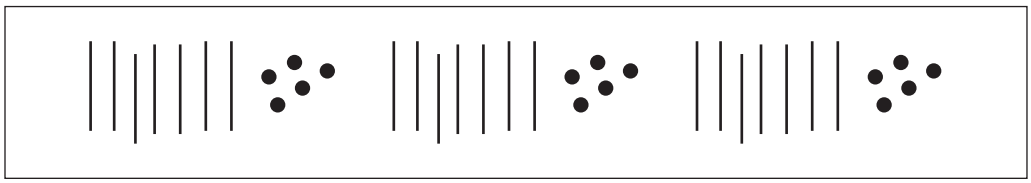
a. $\begin{array}{r} 41 \\ \times\ 7 \\ \hline \end{array}$ **b.** $\begin{array}{r} 23 \\ \times\ 8 \\ \hline \end{array}$ **c.** $\begin{array}{r} 19 \\ \times\ 7 \\ \hline \end{array}$

Name _____

Try This

During summer break, Austin earned $75 a week for 3 weeks. How much money did he earn during this time?

- Use Base Ten Blocks to model the problem.
- Sketch the model and use it to complete the problem.



$3 \times 75 = (3 \times 70) + (3 \times 5)$

$= 210 + 15 = 225$

1. Marta's strawberry patch has 122 strawberry plants. If she increases the number of plants to 5 times that many in the next 10 years, how many plants will she have?

$5 \times$ _____ = (5 × _____) + (5 × _____) + (5 × _____)

= _____ + _____ + _____ = _____

Find the product. Use the distributive property. Sketch a model if you like.

2. $6 \times 414 =$ _____ + _____ + _____ = _____

continued on the next page

Name _____

3. $4 \times 726 =$ _____ + _____ + _____ = _____

4. $3 \times 1{,}481 =$ _____ + _____ + _____ + _____ = _____

5. $5 \times 2{,}241 =$ _____ + _____ + _____ + _____ = _____

6. $2 \times 9{,}241 =$ _____ + _____ + _____ + _____ = _____

7. $8 \times 4{,}201 =$ _____ + _____ + _____ = _____

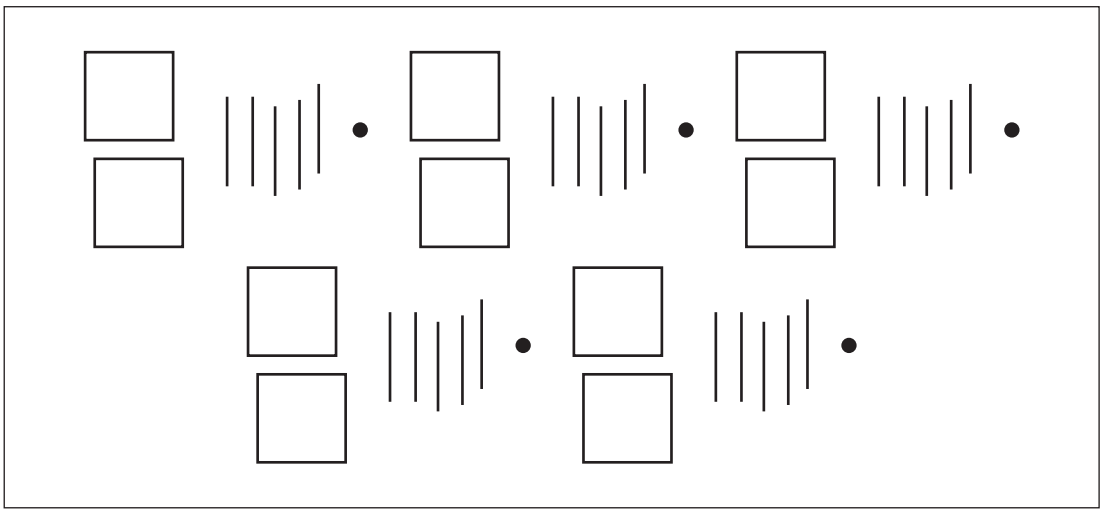
Solve the problem. Show your work.

8. Thompson Brothers Wire Company uses 5 kg of copper for every large spool of wire it makes. The company just received an order for 3,025 spools of wire. How many kilograms of copper will the company need to fill the order?

Name _____

Use Base Ten Blocks to build the model. Use the model to complete the problem.

1. 5 × 251



5 × 251 = (5 × _____) + (5 × _____) + (5 × _____)

= _____ + _____ + _____ = _____

Use Base Ten Blocks to model the product. Sketch the model and use it to complete the problem.

2. 3 × 226

3 × 226 = (3 × _____) + (3 × _____) + (3 × _____)

= _____ + _____ + _____ = _____

continued on the next page

Name _____

Find the product. Use the distributive property. Sketch a model if you like.

3. $7 \times 314 =$ _____ + _____ + _____ = _____

4. $2 \times 735 =$ _____ + _____ + _____ = _____

5. $3 \times 1{,}551 =$ _____ + _____ + _____ + _____ = _____

6. $4 \times 2{,}242 =$ _____ + _____ + _____ + _____ = _____

7. $5 \times 9{,}220 =$ _____ + _____ + _____ = _____

8. $8 \times 2{,}202 =$ _____ + _____ + _____ = _____

Name _____

2

3 × 4 = 12

3 × 44 = 132

3 × 444 = _____

3 × 4,444 = _____

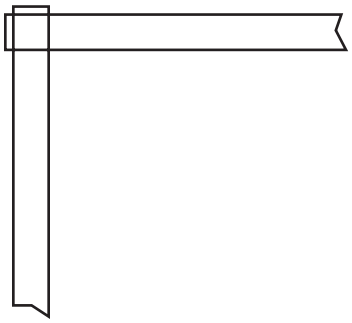
Keep going, and then write three observations.

Name _____

Try This

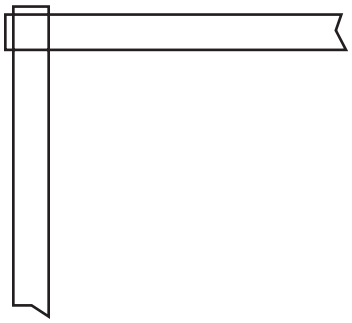
- Use Base Ten Blocks and a Factor Track to model each problem.
- In problems 1–2, sketch your model.
- In problems 3–4, sketch an area model.
- In each problem, complete the number sentences.

1. $12 \times 13 = (10 + 2) \times (10 + 3)$



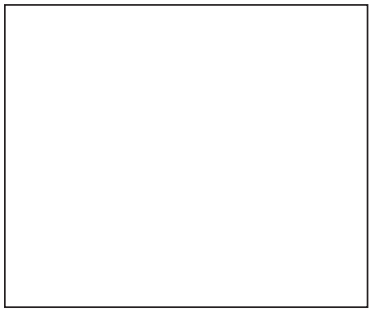
$= (10 \times 10) + (\_\_\_\_ \times 10)$
$+ (10 \times 3) + (\_\_\_\_ \times 3)$
$= \_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_$

2. $11 \times 15 = (\_\_\_\_ + \_\_\_\_) \times (\_\_\_\_ + \_\_\_\_)$



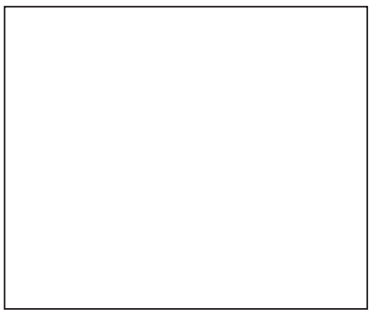
$= (10 \times 10) + (\_\_\_\_ \times \_\_\_\_)$
$+ (\_\_\_\_ \times \_\_\_\_) + (\_\_\_\_ \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_$

3. $13 \times 25 = (\_\_\_\_ + \_\_\_\_) \times (\_\_\_\_ + \_\_\_\_)$



$= (\_\_\_\_ \times \_\_\_\_) + (\_\_\_\_ \times \_\_\_\_)$
$+ (\_\_\_\_ \times \_\_\_\_) + (\_\_\_\_ \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_$

4. $24 \times 32 = (\_\_\_\_ + \_\_\_\_) \times (\_\_\_\_ + \_\_\_\_)$



$= (\_\_\_\_ \times \_\_\_\_) + (\_\_\_\_ \times \_\_\_\_)$
$+ (\_\_\_\_ \times \_\_\_\_) + (\_\_\_\_ \times \_\_\_\_)$
$= \_\_\_\_ + \_\_\_\_ + \_\_\_\_ + \_\_\_\_ = \_\_\_\_$

Find the product. Show your work on the back.

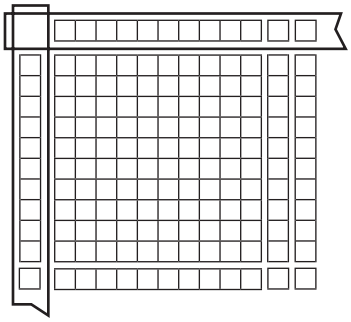
5. $12 \times 19 =$ _____

6. $35 \times 22 =$ _____

Name _____

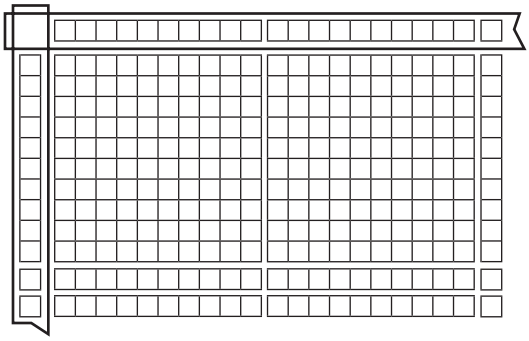
Use a Factor Track and Base Ten Blocks to build the model. Complete the number sentence.

1. 11 × 12 = (10 + 1) × (10 + 2)



= (10 × 10) + (1 × 10)
+ (10 × 2) + (1 × 2)
= ____ + ____ + ____ + ____ = ____

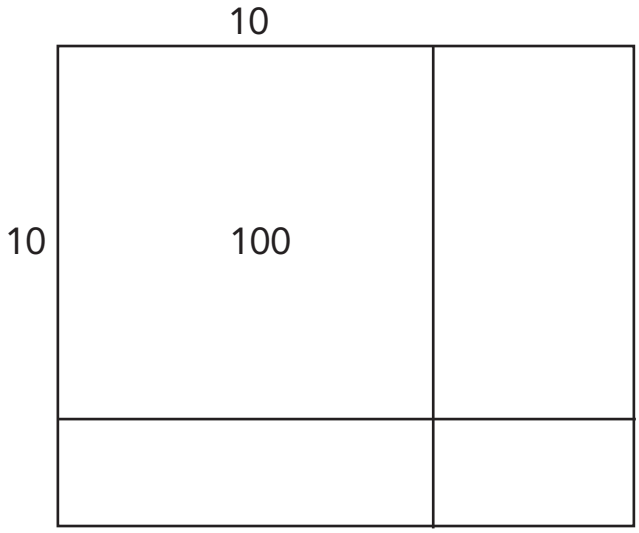
2. 12 × 21 = (10 + ____) × (20 + ____)



= (10 × 20) + (2 × 20)
+ (____ × 1) + (____ × 1)
= ____ + ____ + ____ + ____ = ____

Use a Factor Track and Base Ten Blocks to model the problem. Complete the area sketch. Complete the number sentence.

3. 13 × 15 = (10 + ____) × (10 + ____)



= (10 × 10) + (____ × 10)
+ (10 × ____) + (____ × ____)
= 100 + ____ + ____ + ____ = ____

4. 22 × 25 = (____ + ____) × (____ + ____)

= (20 × 20) + (____ × ____)
+ (____ × ____) + (____ × ____)
= ____ + ____ + ____ + ____ = ____

Find the product. Show your work on the back.

5. 12 × 17 = _____

6. 15 × 21 = _____

Name _____

3

a. Which numbers divide 24 to give a remainder of 3?

b. Which numbers divide 20 to give a remainder of 6?

c. Which numbers divide 100 to give a remainder of 1?

Name _____

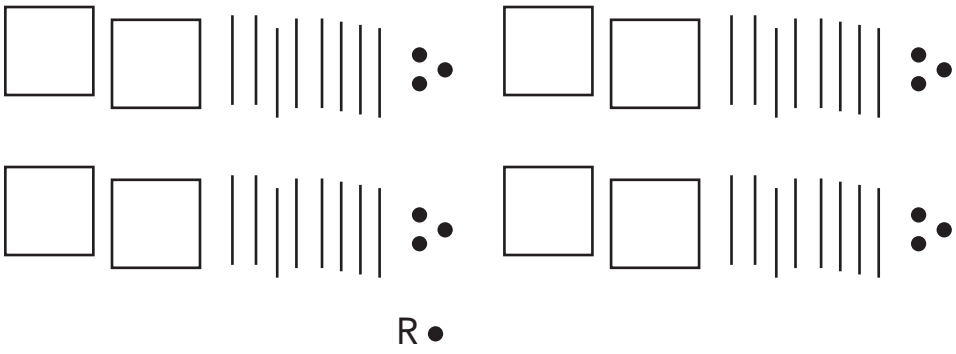
Try This

Benjamin's Best Books has 1,133 books to donate to 4 local schools. They want to donate the same number of books to each school. How many books will each school receive?

- Use Base Ten Blocks to model the problem.
- Sketch and write your answer.

Think: 1,133 ÷ 4.

Model: 1 thousand cube + 1 flat + 3 rods + 3 units, divided into 4 equal groups.



Each school will receive 283 books. There will be 1 book left over. This extra book will not be donated, because it cannot be divided up.

1. Gretchen had 134 wooden beads. She divided them equally into 4 bowls. How many beads are in each bowl? Explain any that are left over.

continued on the next page

Name _____

2. Diego made $534 this summer. He wants to put equal amounts into 3 savings accounts. How much should he deposit in each account? Explain anything that is left over.

3. Theresa brought 1,043 photographs and 5 boxes to the photography club meeting. The members need to put the same number of photos in each box. How many photos should go in each box? Explain any that are left over.

Solve the problem. Explain any remainders.

4. The meeting room has 134 chairs. The members want the chairs arranged in 6 equal rows. How many chairs should be in each row?

_____

_____

continued on the next page

Name _____

5. The Dress Outlet received a shipment of 448 dresses in 4 identical boxes. How many dresses were in each box?

_____

_____

6. Sparkle Pools has 1,310 square tiles. The workers need to divide the tiles into 3 equal piles. How many tiles should go in each pile?

_____

_____

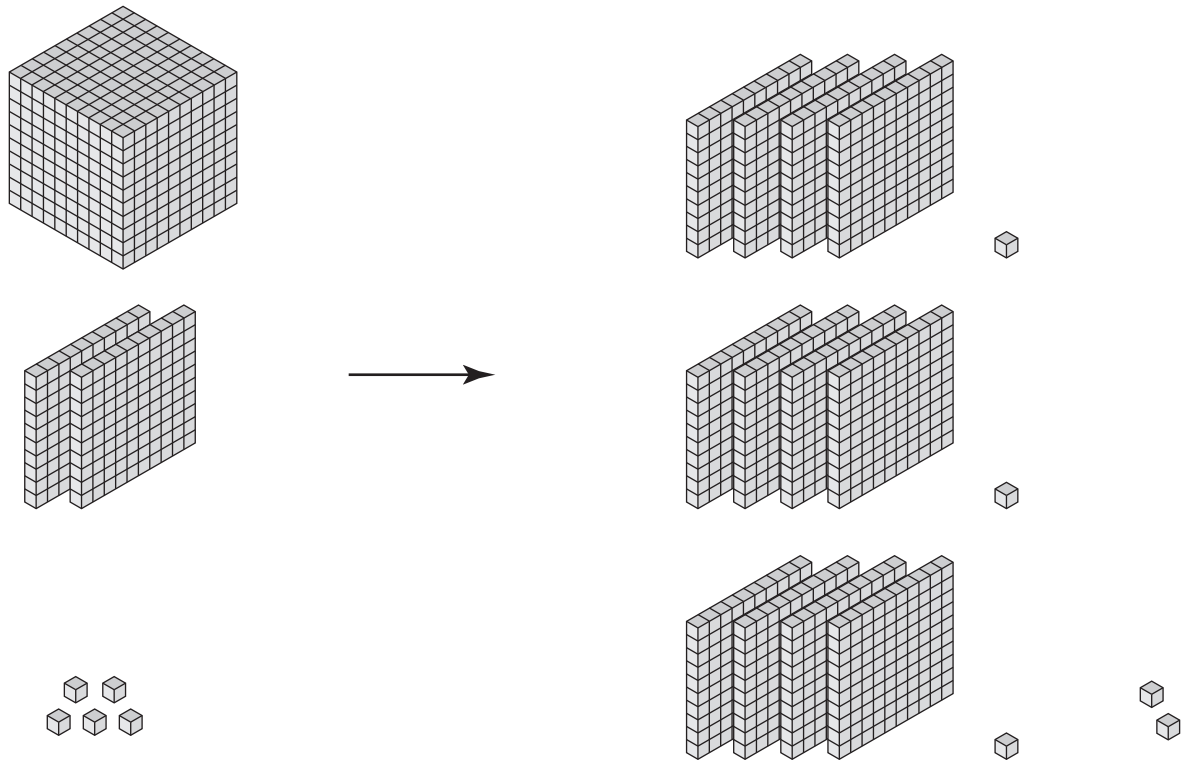
7. 2,312 ÷ 4 = _____

8. 2,334 ÷ 7 = _____

Name _____

Use Base Ten Blocks to build the model. Divide the model into rows to solve the problem. Trade for smaller blocks as needed.

1. Michelle and her friends collected 1,205 box tops during the school year. They want to give an equal number of box tops to each of their 3 teachers. How many box tops will each teacher get? How many box tops will be left over?



Each teacher will get _____ box tops; _____ box tops will be left over. The extra box tops will not be included, because there are not enough to divide between 3 teachers.

Use Base Ten Blocks. Model the problem, and sketch your answer. Write your answer. Explain any remainders.

2. Carmen's Cookie Company wants to give 726 cookies to 6 schools. If each school gets the same number of cookies, how many cookies will each school receive?

continued on the next page

Name _____

3. Riva's company purchased 120 baseball tickets. The company will divide them equally among 5 departments. How many tickets will each department receive?

4. Rebecca's volunteer group baked 1,025 muffins. They will donate them to 4 hospitals. If each hospital gets the same number of muffins, what is the greatest number of muffins each hospital can get?

Solve the problem. Explain any remainders.

5. The Go! Cart Company has 488 model cars they can donate to 4 children's hospitals. If each hospital gets the same number of cars, how many cars will each hospital receive?

_____

_____

continued on the next page

Name _____

6. Lee's Flower Shop received a shipment of 780 roses. The florist puts 8 roses in each vase. How many vases can she fill?

_____

_____

7. 1,032 ÷ 3 = _____

8. 2,154 ÷ 7 = _____