

7

Using Arrays to Divide

You used multiplication facts to describe an array.

3 rows of 4 counters

$$3 \times 4 = 12$$



Explain how the counters are divided into rows.

Write the division fact.

Explore



You will need counters.

There are 24 children in the parade.

They have to line up in equal rows.

How many children could be in each row?

How many different ways can you find?

Use counters to model each way.

Record each model.

Show and Share

Share your answers with another pair of students.

How many different ways can the children line up in equal rows?

Write a division fact for each way.

Connect

There are 12 drum dancers.
They will dance onto the stage in equal rows.
How many dancers could be in each row?



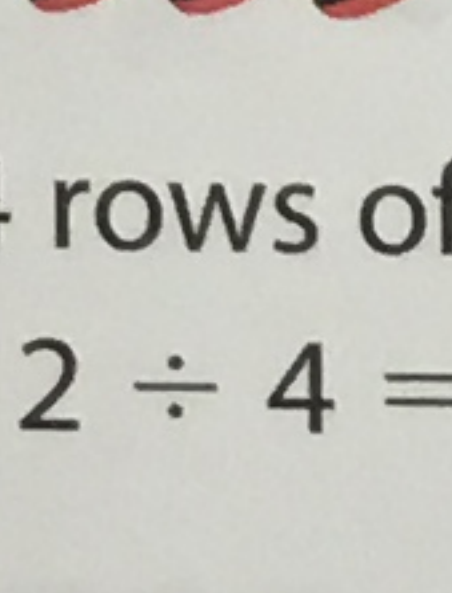
We can use arrays to show the possible ways.



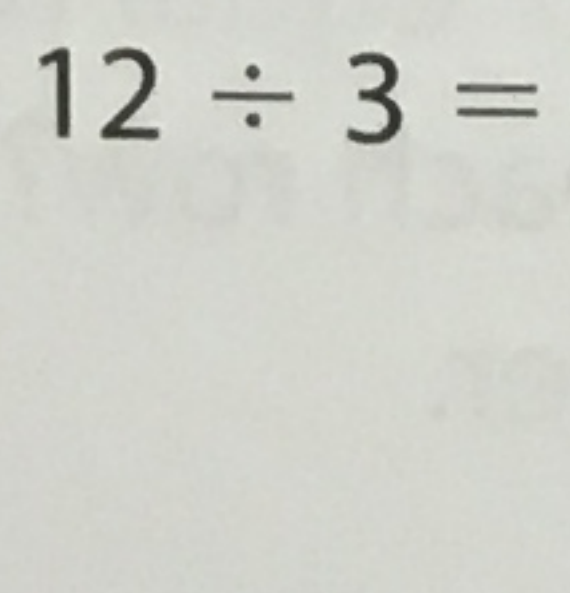
2 rows of 6
 $12 \div 2 = 6$



6 rows of 2
 $12 \div 6 = 2$



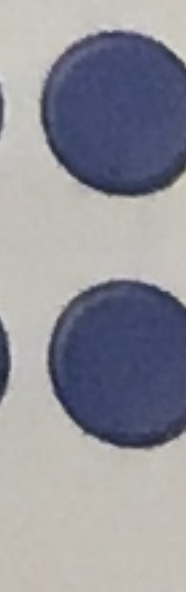
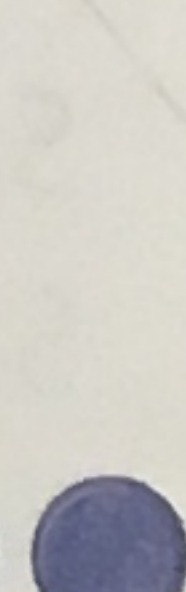
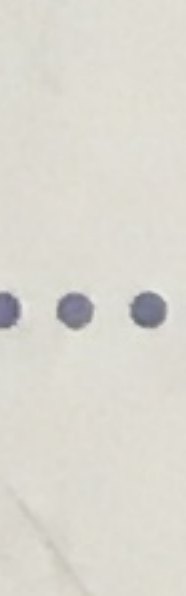
4 rows of 3
 $12 \div 4 = 3$



3 rows of 4
 $12 \div 3 = 4$



1 row of 12
 $12 \div 1 = 12$

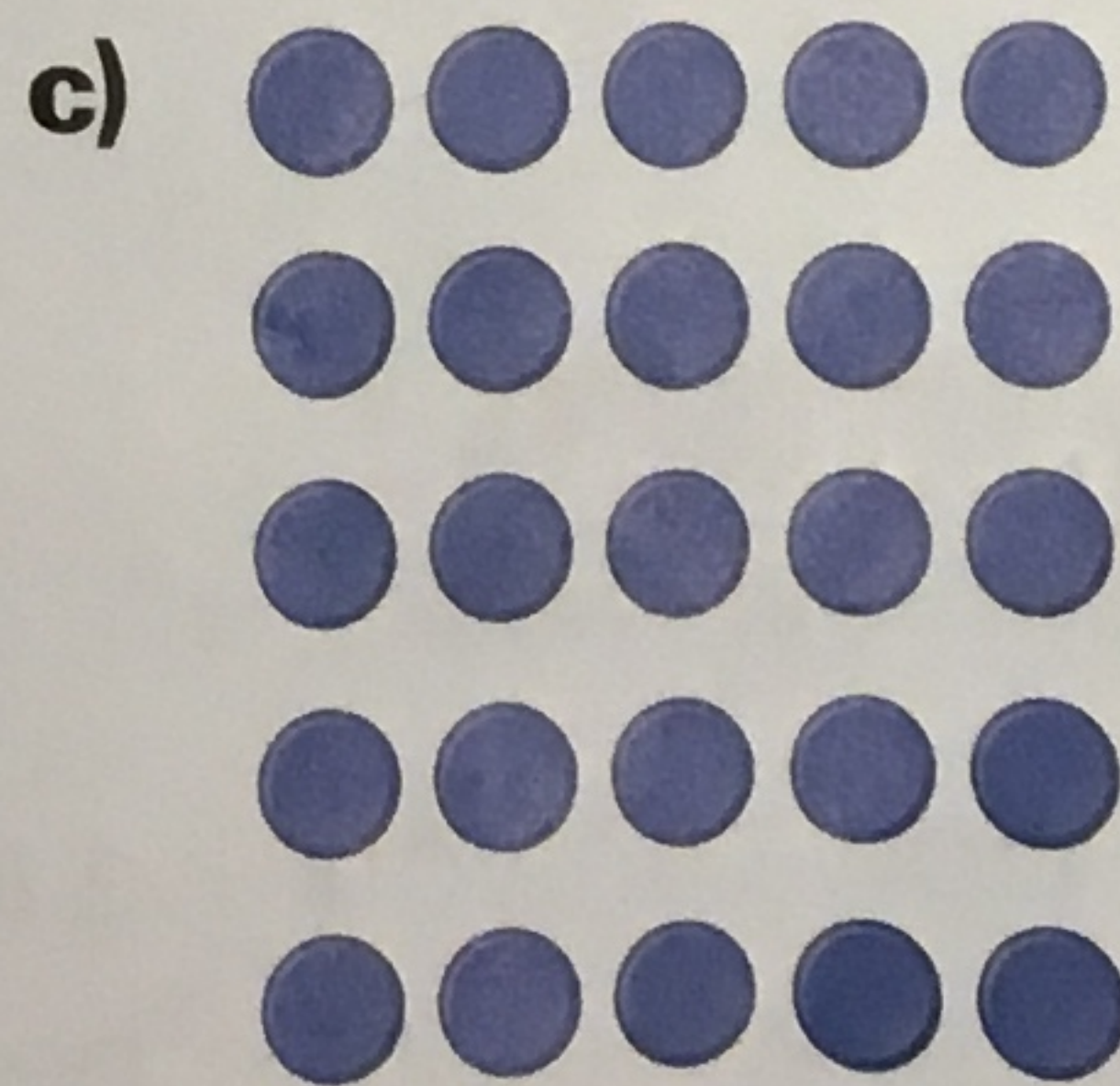
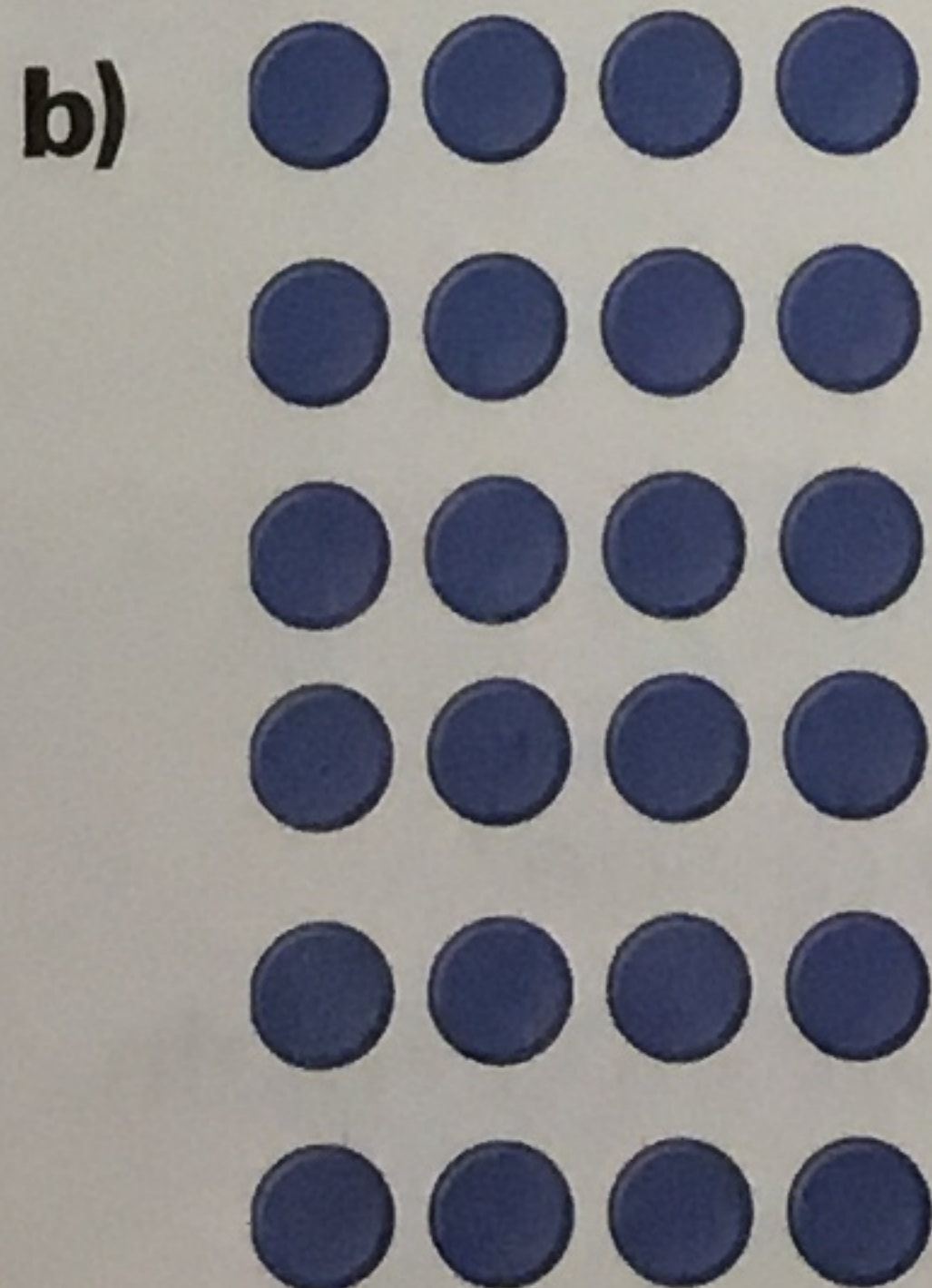
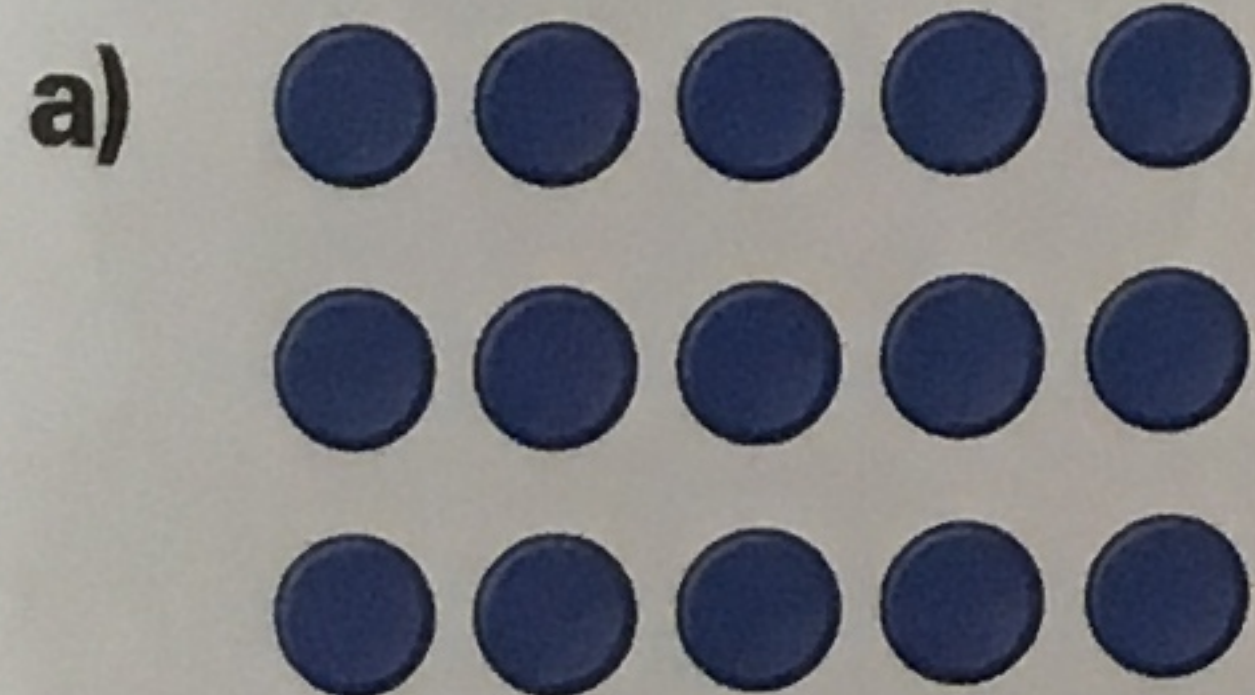


12 rows of 1
 $12 \div 12 = 1$

Practice

Use counters when they help.

1. Write a division fact for each array.



2. a) Draw an array to show $5 \div 1$.
b) Draw an array to show $5 \div 5$.

3. Divide.

a) $6 \div 1$

b) $8 \div 1$

c) $7 \div 1$

d) $1 \div 1$

What patterns do you see?

4. Copy and complete each division equation.

a) $30 \div 6 = \square$

b) $7 \div \square = 7$

c) $\square \div 7 = 4$

d) $36 \div 6 = \square$

5. The choir sings on stage.

a) There are 35 chairs in 5 equal rows.

How many chairs are there in each row?

b) Suppose there are 35 chairs in 7 equal rows.

How many chairs are there in each row?

Draw an array to show each answer.

6. There are 12 drummers and 15 horn players.

a) Can they form equal rows of 2?

How do you know?

b) Can they form equal rows of 3?

How do you know?

c) What other equal rows can they form?

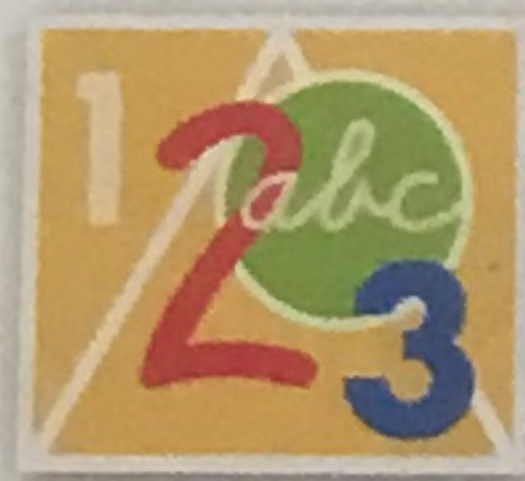
Show your work.

7. Explain why the answer is always 1 when you divide a number by itself.

8. Write a story problem that you can solve by drawing an array to divide.

Solve your problem.

Show your work.



Reflect

How can you use an array to divide?

Use words, numbers, or pictures to explain.