

- Use 16 cubes.



How many different arrays can you make?

Think about making towers of cubes that are equal in height.

Can you write a multiplication sentence to describe the towers?

The numbers in your multiplication sentences are the factors of 16!

- $7 \times 5 = \square = 5 \times \square$

- Find the missing numbers

$$12 \times 6 = 6 \times \underline{\quad}$$

$$2 \times 3 \times 5 = \underline{\quad} \times 5$$

$$2 \times 7 \times 5 = \underline{\quad} \times 5$$

- $13 \times 12$  can be solved by using factor pairs, eg  $13 \times 3 \times 4$  or  $13 \times 2 \times 6$ .

What factor pair could you use to solve  $17 \times 8$ ?

- Fill in the missing numbers

$$25 \times 3 = \square \times \square \times \square$$

- Use factor pairs to solve  $15 \times 8$ .  
Is there more than one way you can do it?

- Multiply a number by itself and then make one factor one more and the other one less.

What do you notice?

Does this always happen?

$$\text{Eg } 4 \times 4 = 16$$

$$6 \times 6 = 36$$

$$5 \times 3 = 15$$

$$7 \times 5 = 35$$

Try out more examples to prove your thinking.

- Place  $<$ ,  $>$ , or  $=$  in these number sentences to make them correct:  
 $50 \times 4$    $4 \times 50$   
 $4 \times 50$    $40 \times 5$   
 $200 \times 5$    $3 \times 300$
- The school has a singing group of more than 12 singers but less than 32.  
They sing together in different ways. Sometimes they sing in pairs and sometimes in groups of 3, 4 or 6.  
Whatever size groups they are in, no one is left out and everyone is singing.  
How many singers are there in the school choir?

