

- 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!

$$7 \times 5 = \overset{35}{\blacksquare} = 5 \times \overset{7}{\blacksquare}$$

- Find the missing numbers

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

$$2 \times 3 \times 5 = \underline{6} \times 5$$

$$2 \times 7 \times 5 = \underline{14} \times 5$$

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

What factor pair could you use to solve 17 x 8?

$$17 \times 2 \times 4$$

- Fill in the missing numbers

$$25 \times 3 = \begin{matrix} \square \\ 5 \end{matrix} \times \begin{matrix} \square \\ 5 \end{matrix} \times \begin{matrix} \square \\ 3 \end{matrix}$$

- Use factor pairs to solve 15 x 8.

Is there more than one way you can do it?

$$15 \times 2 \times 4$$

$$8 \times 3 \times 5$$

- 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.

$$5 \times 5 = 25$$

$$6 \times 4 = 24$$

$$3 \times 3 = 9$$

$$4 \times 2 = 8$$

16 Cubes



$$4 \times 4 = 16$$

$$8 \times 2 = 16$$

- Place  $<$ ,  $>$ , or  $=$  in these number sentences to make them correct:

$50 \times 4 \blacksquare 4 \times 50$

$50 \times 4 = 4 \times 50$

$4 \times 50 \blacksquare 40 \times 5$

$4 \times 50 = 40 \times 5$

$200 \times 5 \blacksquare 3 \times 300$

$200 \times 5 > 3 \times 300$

- 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?

There are 24 singers.

$24 \div 2 = 12$

$24 \div 3 = 8$

$24 \div 4 = 6$

$24 \div 6 = 4$

