

# **UNCOVER COUNTING**

**10 Times Table**

# Picture Puzzles

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Publisher ... Mathematics Centre  
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This Picture Puzzle is based on  
... Uncover Counting from Calculating Changes  
Teaching Notes  
... [mathematicscentre.com/picturepuzzles/teachingnotes.htm](http://mathematicscentre.com/picturepuzzles/teachingnotes.htm)

# Picture Puzzles

## To Do

1. Look for many ways to count rows of ten.
2. Record ten times tables facts.
3. Calculate using the ten times tables.

## You Need

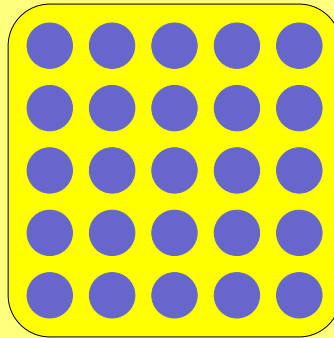
- One Poly Plug each



Poly Plug

# Picture Puzzles

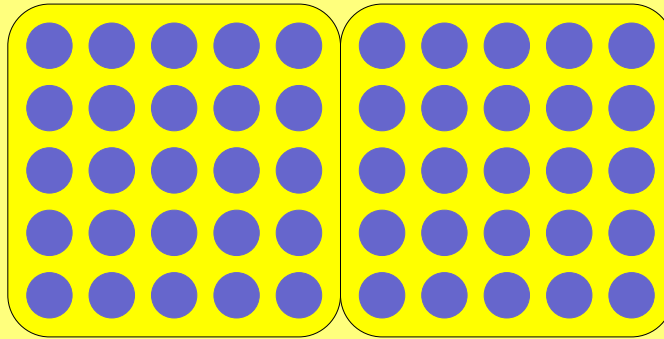
Both of you make rows of 5 blue plugs.



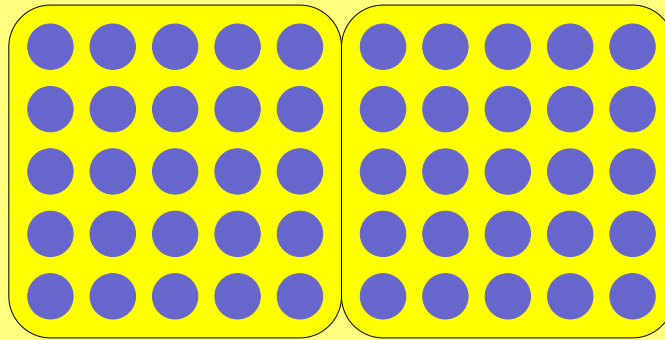
# Picture Puzzles

Put your boards together to make rows of 10.

Like this.



# Picture Puzzles



Now use something to cover all the boards.

Like this.



How many blue plugs can you see?



# Picture Puzzles

In a minute you will slide the cover down one row. How many blue plugs will you see?

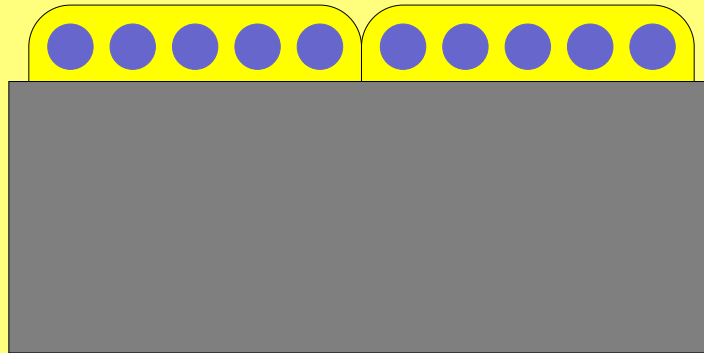


Write your prediction in your journal.

Slide the cover down one row.



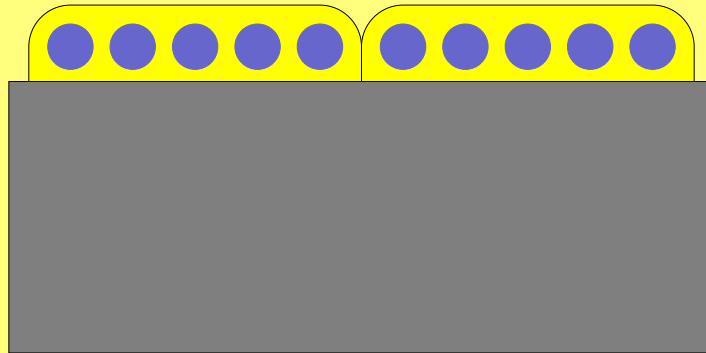
Was your guess correct?



How do you know there are 10 blue plugs?

# Picture Puzzles

Draw the picture in your journal.



Write 5 ways of knowing there are 10 blue plugs.

# Picture Puzzles

$$2 \times 5$$

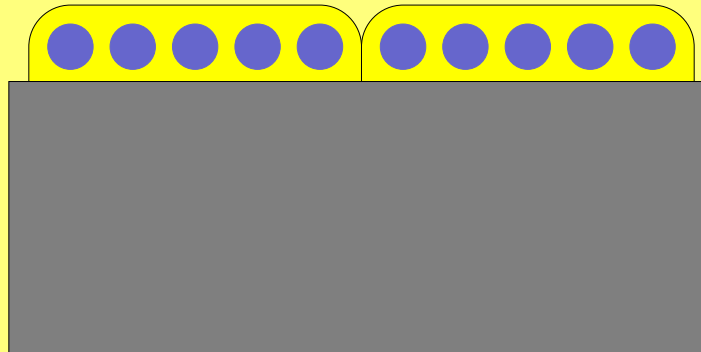
counting by ones

Did you find any of these?

$$2 + 2 + 2 + 2 + 2$$

$$1 \times 10$$

counting by fives



$$10 \times 1$$

counting by twos

counting by tens

$$1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$$

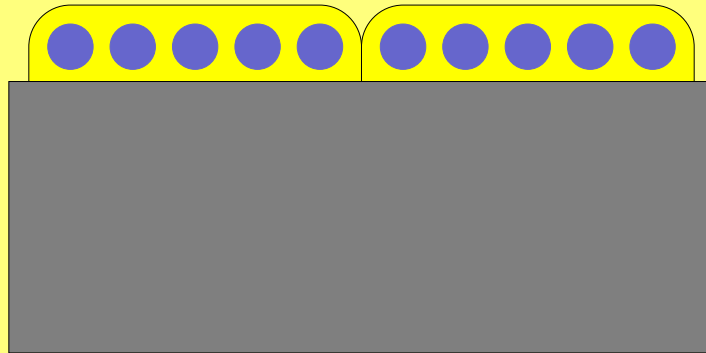
$$5 + 5$$

Which ones belong together?

$$5 \times 2$$

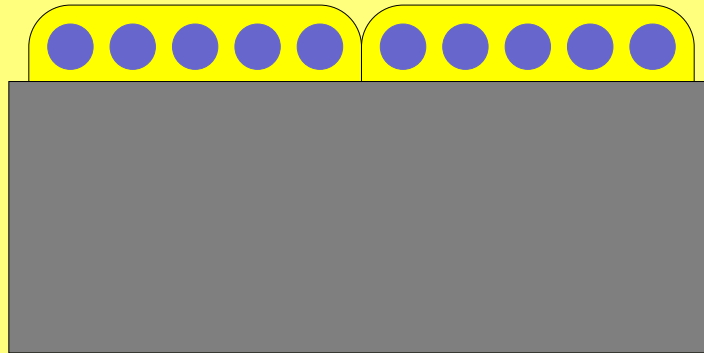
# Picture Puzzles

In a minute you will slide the cover down one *more* row. How many blue plugs will you see?

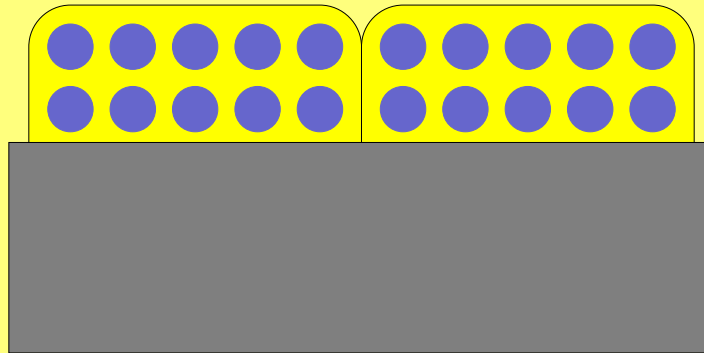


Write your prediction in your journal.

Slide the cover down one row.



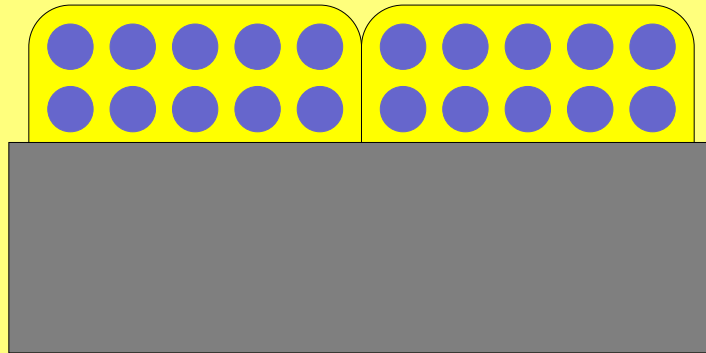
Was your guess correct?



How do you know there are 20 blue plugs?

# Picture Puzzles

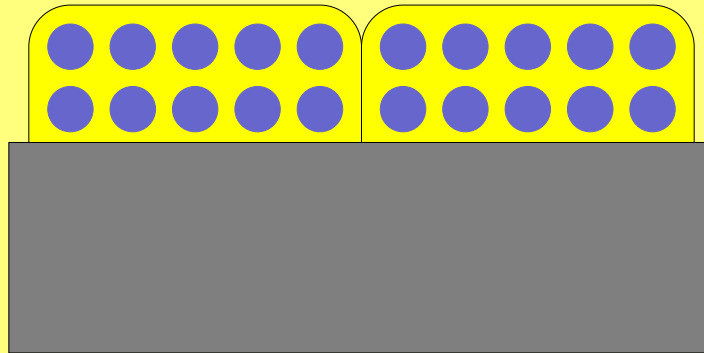
Draw the picture in your journal.



Write 5 ways of knowing there are 20 blue plugs.

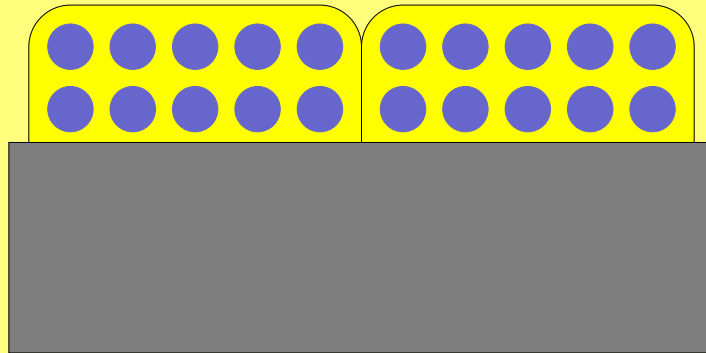
# Picture Puzzles

I'll bet you can't find 5 more ways.



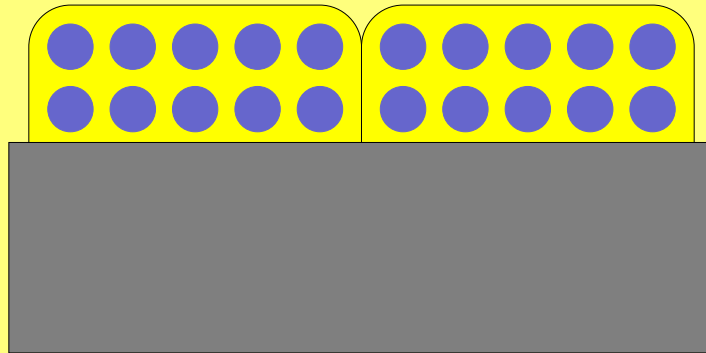
# Picture Puzzles

In a minute you will slide the cover down one *more* row. How many blue plugs will you see?

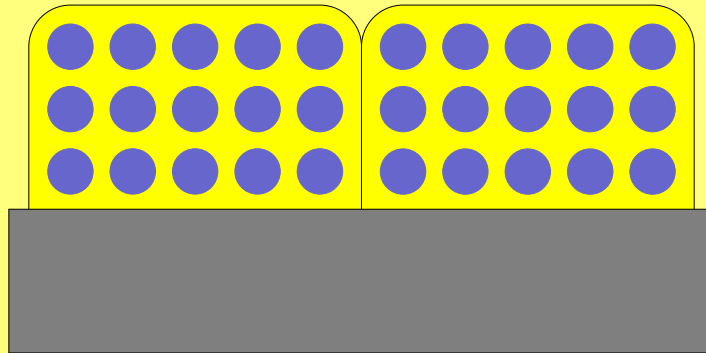


Write your prediction in your journal.

Slide the cover down one row.



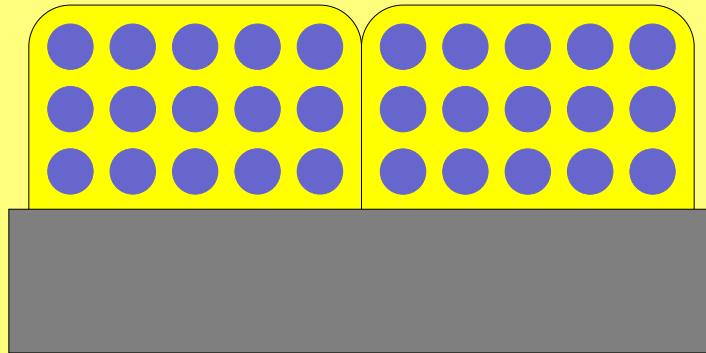
Was your guess correct?



How do you know there are 30 blue plugs?

# Picture Puzzles

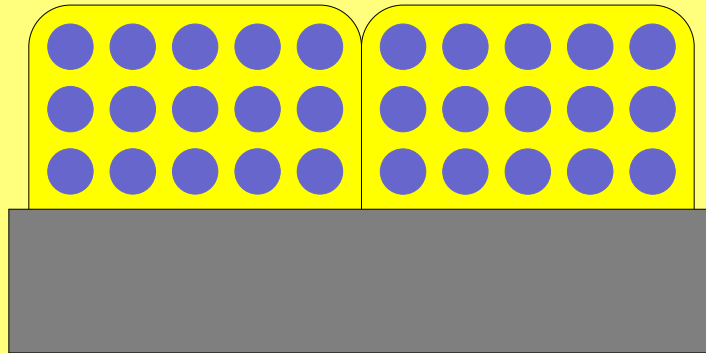
Draw the picture in your journal.



Write 5 ways of knowing there are 30 blue plugs.

# Picture Puzzles

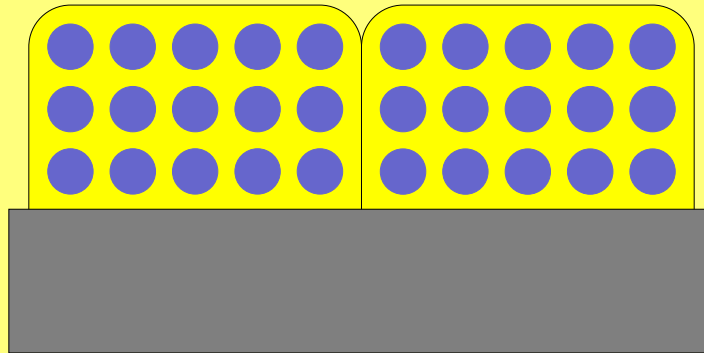
I'll bet you can't find 5 more ways.



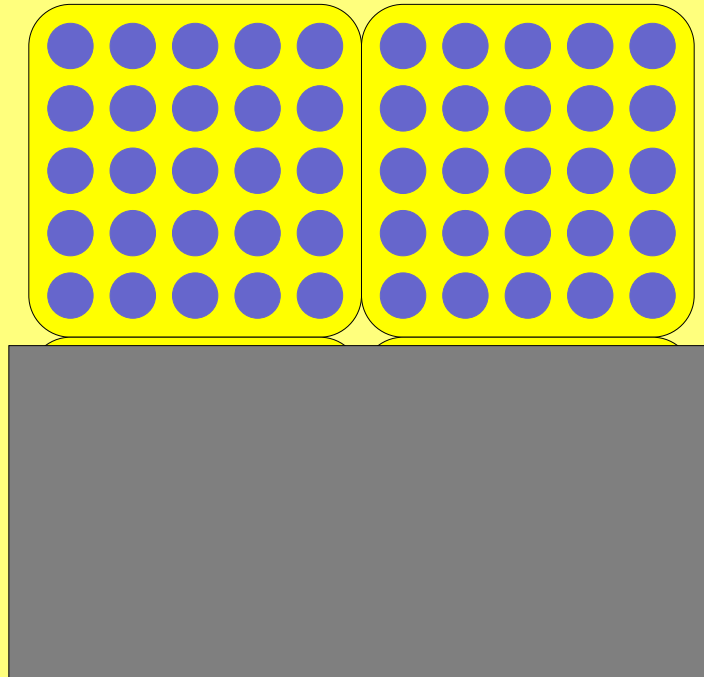
# Picture Puzzles

Two rows left.

For each one, predict, slide and record lots of ways.



Calculate  
 $6 \times 10$ ,  $7 \times 10$ ,  $8 \times 10$ ,  $9 \times 10$ ,  $10 \times 10$   
Three ways for each one.



**Picture  
Puzzles**

**more**

**Picture  
Puzzles**

## Picture Puzzles

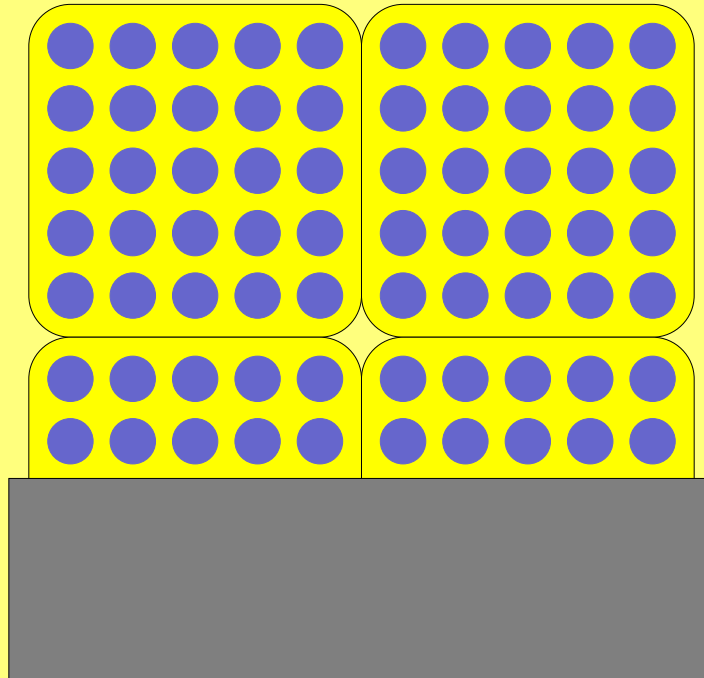
If I tell you there are 70 plugs in rows of 10,  
can you tell me the number of rows?

# Picture Puzzles

If I tell you there are 70 plugs in rows of 10,  
can you tell me the number of rows?  
Can you check it another way?

# Picture Puzzles

If I tell you there are 70 plugs in rows of 10,  
can you tell me the number of rows?  
Can you check it another way?



## Picture Puzzles

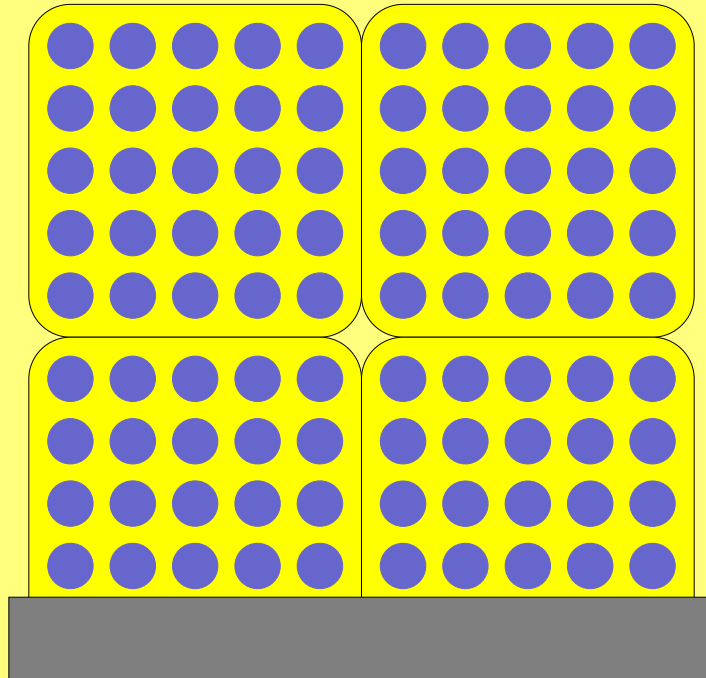
If I tell you there are 90 plugs in rows of 10,  
can you tell me the number of rows?

# Picture Puzzles

If I tell you there are 90 plugs in rows of 10,  
can you tell me the number of rows?  
Can you check it another way?

# Picture Puzzles

If I tell you there are 90 plugs in rows of 10,  
can you tell me the number of rows?  
Can you check it another way?



**even more**

## Picture Puzzles

If I tell you there are 250 plugs in rows of 10  
*and* that I can see exactly 7 rows, how many  
plugs are *covered*?

THE END...

...OR IS IT?