

# GARDEN BEDS

# Picture Puzzles

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This Picture Puzzle is based on

... Task 147, Garden Beds

Teaching Notes

... [mathematicscentre.com/picturepuzzles/teachingnotes.htm](http://mathematicscentre.com/picturepuzzles/teachingnotes.htm)

# Picture Puzzles

## To Do

1. Find your own way to connect plants and tiles.
2. Explain other ways to connect plants and tiles.
3. Calculate using your own way and other ways.

## You Need

- Square tiles or cube blocks in 2 colours
- Square graph paper

# Picture Puzzles



Plant

# Picture Puzzles



Plant



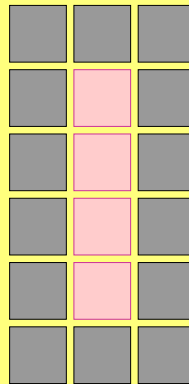
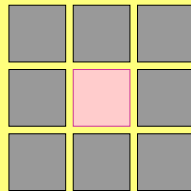
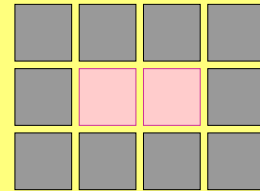
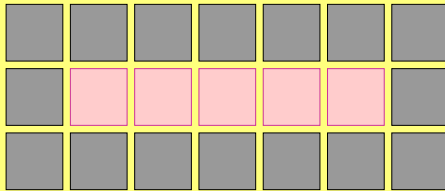
Tile

# Picture Puzzles

 Plant

 Tile

Garden beds with a tile border.

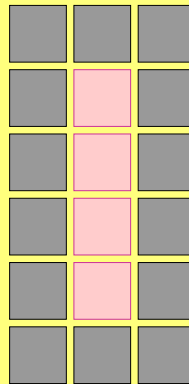
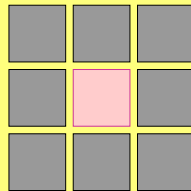
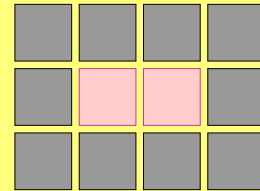
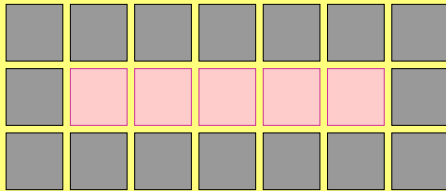


# Picture Puzzles

 Plant

 Tile

Garden beds with a tile border.



Make your own  
garden bed like  
these.

**If I tell you any number of plants ( $P$ )  
can you tell me how to calculate the  
number of tiles ( $T$ ) in the border?**



**Explain in your journal and calculate  
the number of tiles for 100 plants.**

**Picture  
Puzzles**

**more**

**Picture  
Puzzles**

# Picture Puzzles

Rashida sees it like this

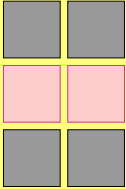
# Picture Puzzles

Rashida sees it like this



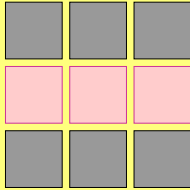
# Picture Puzzles

Rashida sees it like this



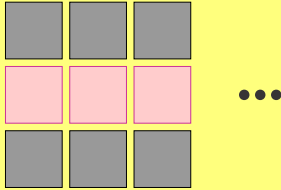
# Picture Puzzles

Rashida sees it like this



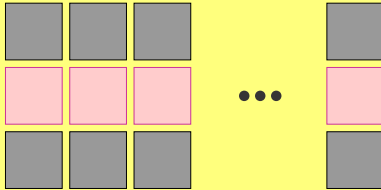
# Picture Puzzles

Rashida sees it like this



# Picture Puzzles

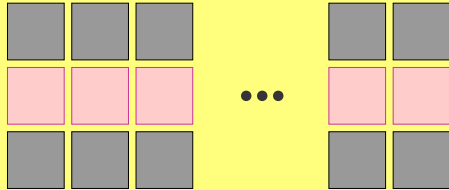
Rashida sees it like this





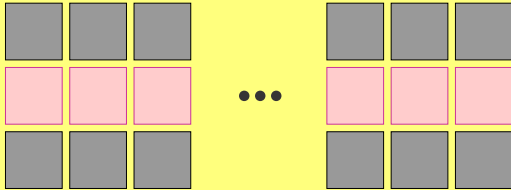
# Picture Puzzles

Rashida sees it like this



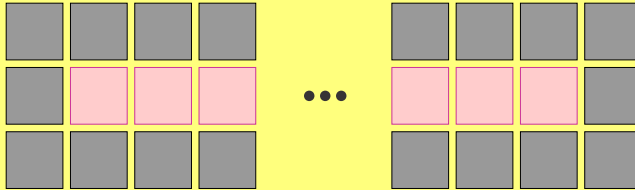
# Picture Puzzles

Rashida sees it like this



# Picture Puzzles

Rashida sees it like this



**Explain Rashida's way and use it to  
calculate the number of tiles  
for 81 plants.**

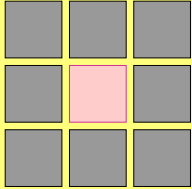
**Investigate using Rashida's way to  
calculate the number of plants  
if she only has 40 tiles.**

# Picture Puzzles

Steven sees it like this

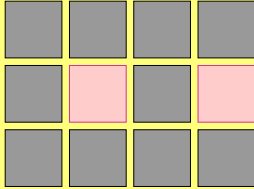
# Picture Puzzles

Steven sees it like this



# Picture Puzzles

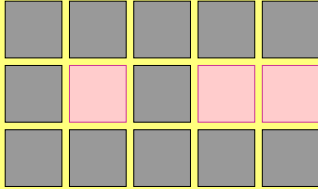
Steven sees it like this





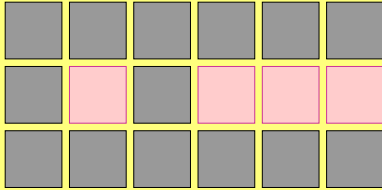
# Picture Puzzles

Steven sees it like this



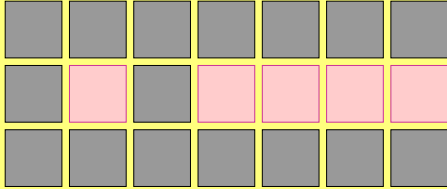
# Picture Puzzles

Steven sees it like this



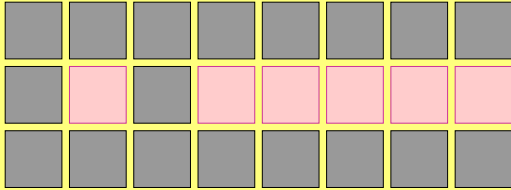
# Picture Puzzles

Steven sees it like this



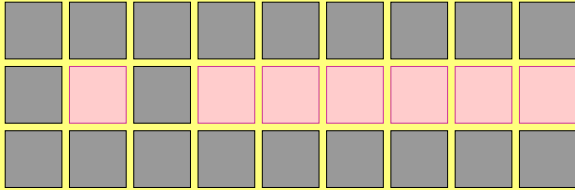
# Picture Puzzles

Steven sees it like this



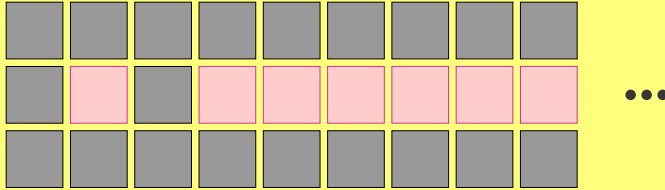
# Picture Puzzles

Steven sees it like this



# Picture Puzzles

Steven sees it like this



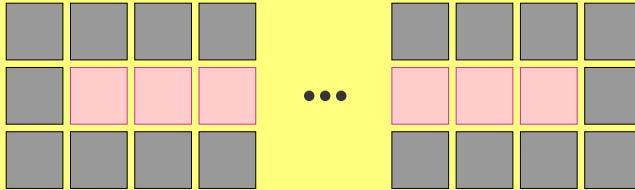
**Explain Steven's way and use it to  
calculate the number of tiles  
for 102 plants.**

**Investigate using Steven's way to  
calculate the number of plants  
if he only has 30 tiles.**

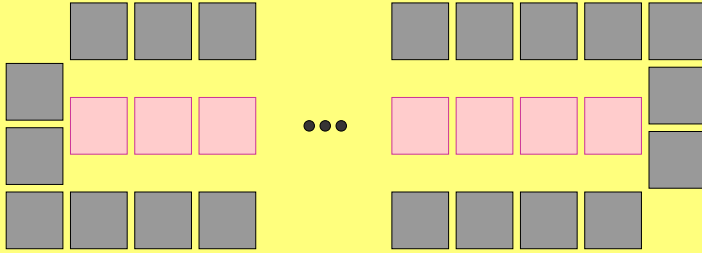


# Picture Puzzles

Irene sees it like this



# Picture Puzzles

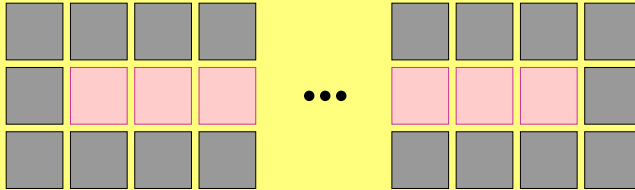


**Explain Irene's way and use it to  
calculate the number of tiles  
for 54 plants.**

**Investigate using Irene's way to  
calculate the number of plants  
if she only has 110 tiles.**

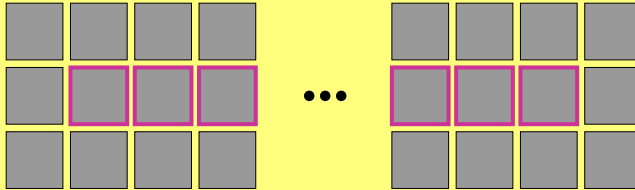
# Picture Puzzles

Another way to see it is...



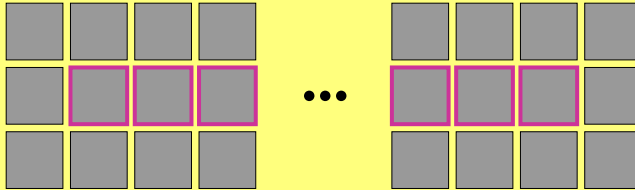
# Picture Puzzles

...like Geoffrey who imagines this



# Picture Puzzles

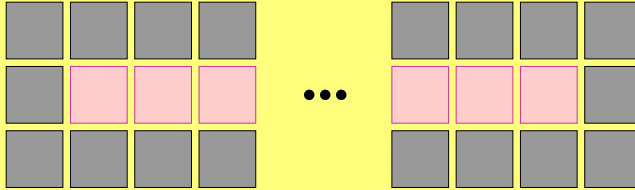
...like Geoffrey who imagines this



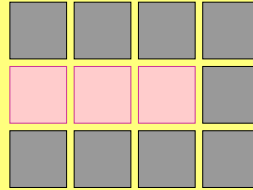
Where are the plants?

# Picture Puzzles

Surprise!



...





**Explain Geoffrey's way and use it to  
calculate the number of tiles  
for 67 plants.**

**Investigate using Geoffrey's way to  
calculate the number of plants  
if he only has 60 tiles.**

THE END...

...OR IS IT?