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**Blackboard Tiles** 

P2P Count Up Rods

Linking Pegboards



The Pegs to Count Up rods and frame are made of bamboo which is a member of the grass family.

It's versatility makes it one of the world's most amazing plants.

Bamboo grows up in 5-8 years, absorbs up to 4 times more carbon dioxide and returns up to 35% more oxygen to the atmosphere than other plants.



Welcome to the digital section of the Pegs to Count Up: Exploring Numbers 1-5 support material.

The following instruction pages 1-8 include an easy to follow step by step guide on how to use the work cards. The cards and instruction sections are colour coded by title for easy reference.

Following the instructions, a digital edition of the work cards have been included.

## **Instruction Sections**

| <b>1-2. (Cards 1-5)</b> | MATCHING                   |
|-------------------------|----------------------------|
| <b>3-4. (Cards 6-9)</b> | CONTINUING THE PATTERN     |
| 5. (Cards 10-11)        | SMALLER / BIGGER / SAME AS |
| 6-7. (Cards 12-17)      | STEP COUNTING              |
| 8. (Cards 18-25)        | NUMBER SENTENCES           |

Matching is an important early childhood mathematical skill that keeps repeating throughout one's educational life in various forms. Matching is an important classification skill for pre-schoolers and will help children to develop skills throughout their education.

#### Matching and learning about numbers 1-5



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Pegst Count Up 1-5

#### Card 1

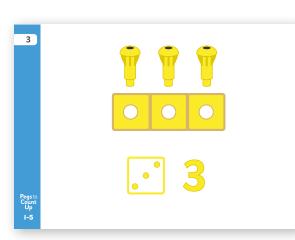
#### Learning about 'one'.

- **a.** Find one orange peg and one orange rod and make what is on the card.
- **b.** Now find the 'one' on a dice. (*Skip this step if you do not have any dice*).
- **c.** Draw the dice and write the number 1.

#### Card 2

#### Learning about 'two'.

- **a.** Find two blue pegs and the blue 'two' rod.
- **b.** Now find 'two' on a dice. (*Skip this step if you do not have any dice*).
- **c.** Draw the dice and write the number 2.



## Card 3

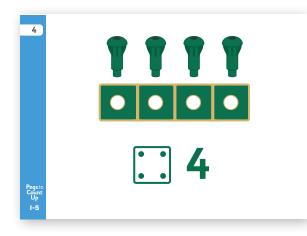
#### Learning about 'three'.

- **a.** Look at the card about 'three'.
- **b.** Find three yellow pegs and the yellow 'three' rod.
- **c.** Now find the 'three' on a dice. (*Skip this step if you do not have any dice*).
- **d.** Draw the dice and write the number 3.

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Pegst Count Up 1-5

# MATCHING



**...** 5

### Card 4

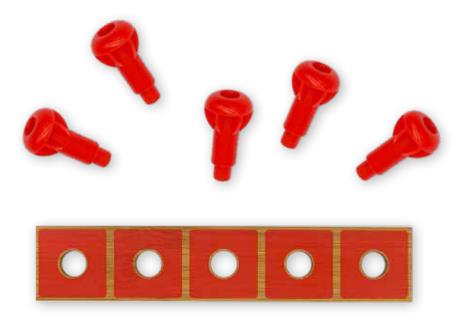
#### Learning about 'four'.

- **a.** Find four green pegs and the green 'four' rod.
- **b.** Now find four on a dice. (*Skip this step if you do not have any dice*).
- **c.** Draw the dice and write the number 4.

## Card 5

#### Learning about 'five'.

- **a.** Find five red pegs and the red 'five' rod.
- **b.** Now find five on a dice. (*Skip this step if you do not have any dice*).
- **c.** Draw the dice and write the number 5.

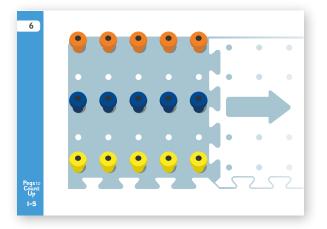


## **CONTINUING THE PATTERN**

There are many indications that an understanding of pattern and structure is important in early mathematics learning. Spotting underlying patterns is important for identifying many different kinds of mathematical relationships.

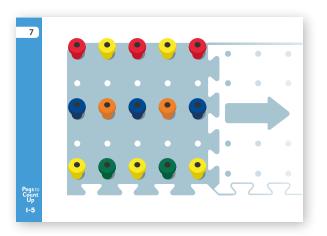
Pattern awareness has been described as early algebraic thinking.

#### Continuing the pattern (using two boards linked together)



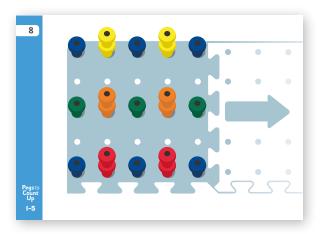
#### Card 6

- a. Question: What do you see on the card?
- **b.** *Answer:* (Orange pegs across the top; blue pegs across the middle; yellow pegs across the bottom).
- **c.** Continue the pattern across the second board working from left to right.



#### Card 7

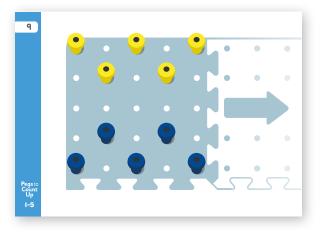
- a. Question: What patterns do you see on this card?
- **b.** *Answer:* (Red/yellow across the top; blue/orange across the middle; yellow/green across the bottom).
- c. Continue the pattern across the second board.



#### Card 8

- a. *Question:* Tell me about this pattern. What do you see?
- **b.** *Answer:* (One blue/two yellows stacked across the top; one green/two orange across the middle; one blue/two red across the bottom).
- **c.** Continue the pattern as before.

# **CONTINUING THE PATTERN**



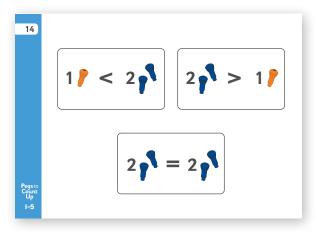
#### Card 9

- a. *Question:* What do you see on this card?
- **b.** *Answer:* (zigzag yellows across the top two rows; zigzag blues across the bottom two rows).
- **c.** Continue the pattern as before.



## SMALLER / BIGGER / SAME AS

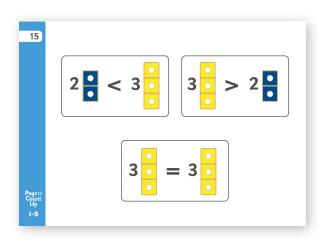
Number sense is the ability to understand the relationship between numbers. Comparing number is an important part of understanding the mathematical concepts of 'greater than', 'less than' and 'equal to'.



#### Card 10

Smaller than / bigger than / same as

- a. When you see the sign < or > between two numbers it means that one is smaller than or bigger than the other.
- **b.** The smaller number is the one on the small end of the sign.
- c. Copy what you see on the card putting one orange peg on the small end of the < or > and two blue pegs on the big end.
- **d.** Draw them.
- e. Where you see = it means that the numbers are the same size.
- **f.** Copy the blue pegs and then draw them.

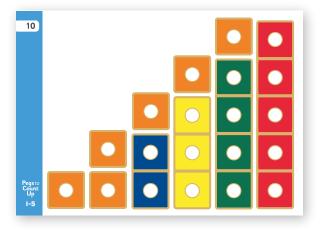


#### Card 11

#### You can do the same with the number rods.

**a.** Copy what you see on the card and then draw them.

Counting seems like such a simple concept but when this can be broke down there are several distinct counting principals that progressively build towards a child being able to count a group of objects.



#### Step counting

#### Card 12

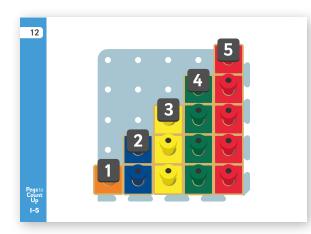
- a. Place one orange rod on the board starting at the bottom left corner.
- b. Put another beside it with another above it, making two.
- **c.** Match a blue 'two' rod next to it.
- d. Question: Is it the same height? Answer: Yes.
- e. Add another orange rod above it.
- **f.** Now match a yellow 'three' rod next to it.
- g. Question: Is it the same height? Answer: Yes.
- **h.** Add another orange rod above it.
- i. Now match a green 'four' rod next to it.
- j. Question: Is it the same height? Answer: Yes.
- **k.** Add another orange rod above it.
- **I.** Now match a red 'five' rod next to it.
- m. Question: Is it the same height? Answer: Yes

You have made steps by adding one each time.

#### Card 13

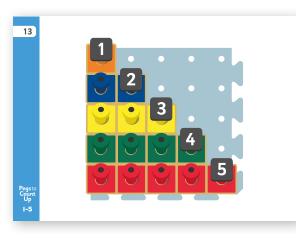
**a.** Make the same steps, 1-5, as before using the rods of the colour you see on the card.

## **STEP COUNTING**



### Card 14

- a. Make the same steps as before but this time place the pegs of the correct colour and number in each rod.
- **b.** Now label the steps 1-5 by writing the numbers onto the blank tiles.



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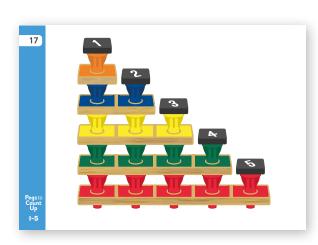
Pegst Coun Up 1-5

## Card 15

- a. Repeat these stepsbut this time start at the top left of the boardwith 1, placing 2 below it, then 3 and so on.
- **b.** Label them by writing the numbers onto the blank tiles.

#### Card 16

- **a.** Make stacking steps with the pegs starting with one orange and ending with five red pegs.
- **b.** Label them by writing the numbers onto the blank tiles.



#### Card 17

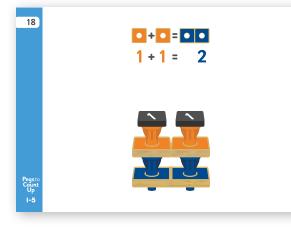
- a. Now make stacking steps using the coloured rods and pegs. You need to start with the red 'five' rod, then the green 'four' rod, etc.
- **b.** Label them by writing the numbers onto the blank tiles.

## **NUMBER SENTENCES**

Numbers can represent how many objects there are in a set; for small sets we can recognise the number of objects (subitise) instead of counting them. Composition is knowing numbers are made up of two or more other smaller numbers and this involves 'part-whole' understanding. Learning to 'see' a whole number and its parts at the same time is a key development in children's number understanding.

Children need to be able to partition numbers and put them back together again.

#### Addition / Making number sentences



**-** + **- - - -**

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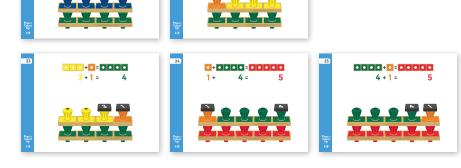
#### Card 18

- a. Copy the stack at the bottom of the card, starting with the blue rod and pegs, then placing the orange rods and pegs above them.
- b. Question: Are they the same size?Answer: Yes, because 1 plus 1 makes two.
- **c.** Now place the rods in a line, copying what you see at the top of the card.
- **d.** Draw it and write the numbers and signs + (plus/add) and = (the same as).
- e. You have written this number sentence: 1 + 1 = 2. *Question:* Read it back to me. *Answer:* One and one makes two.



**a.** Do the same for the numbers three, four and five.

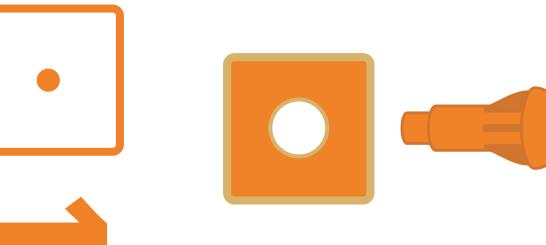
When you add them you get the same answer whichever way round you place the numbers.



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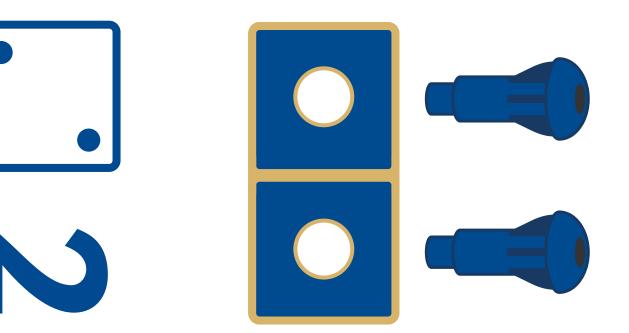
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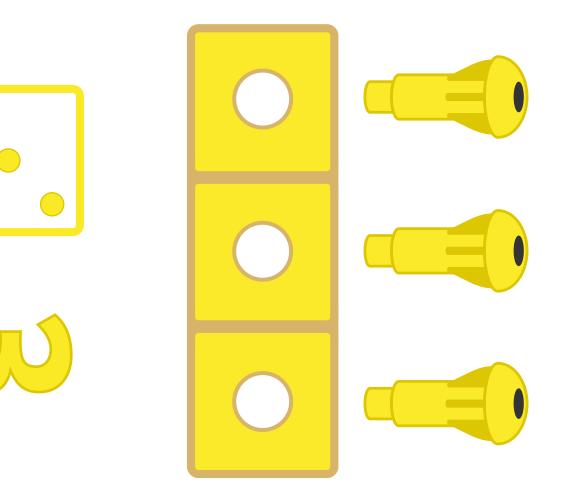




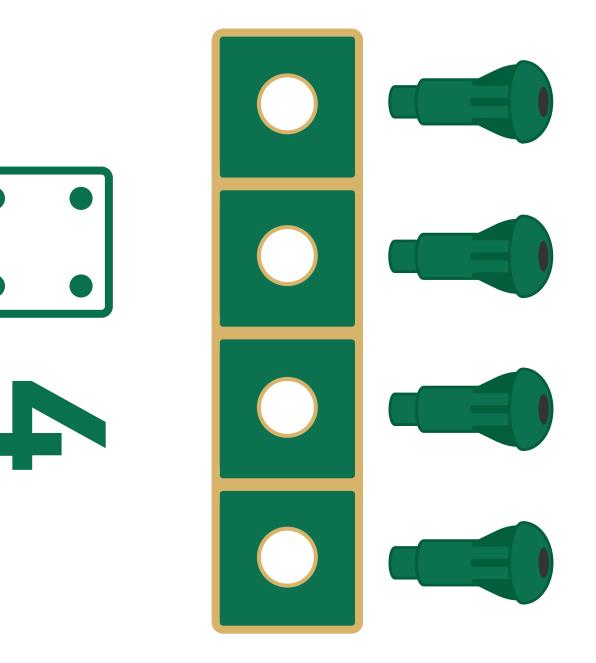




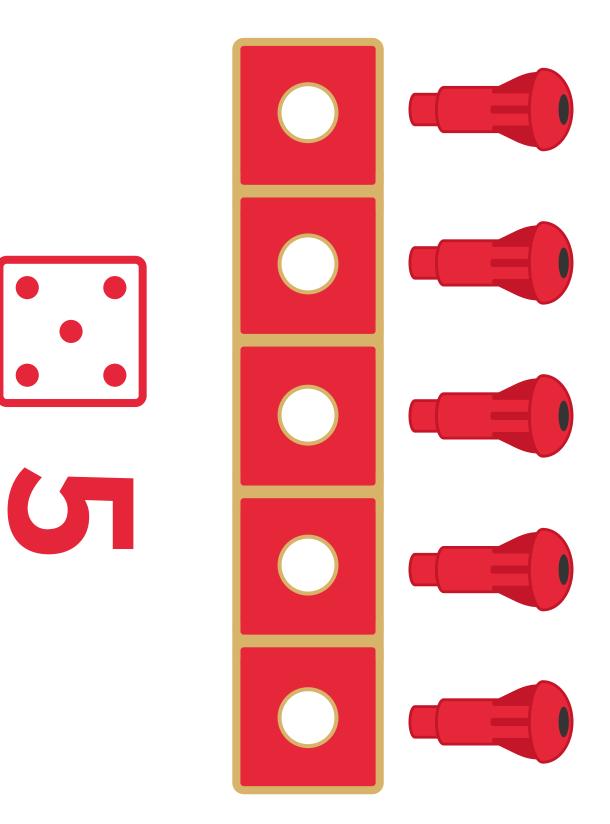




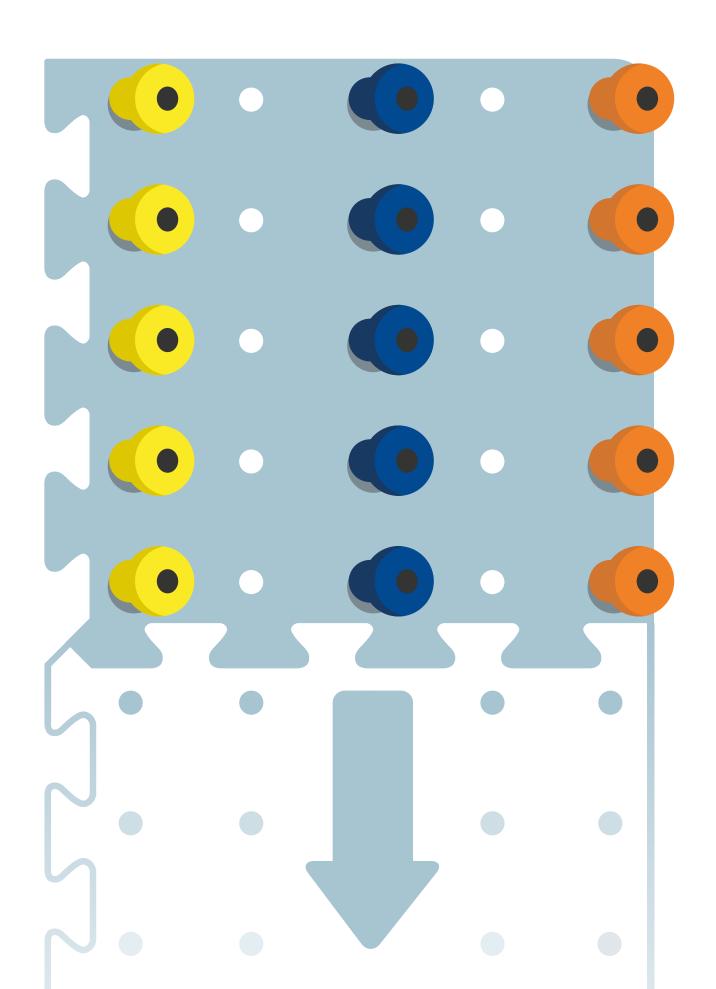




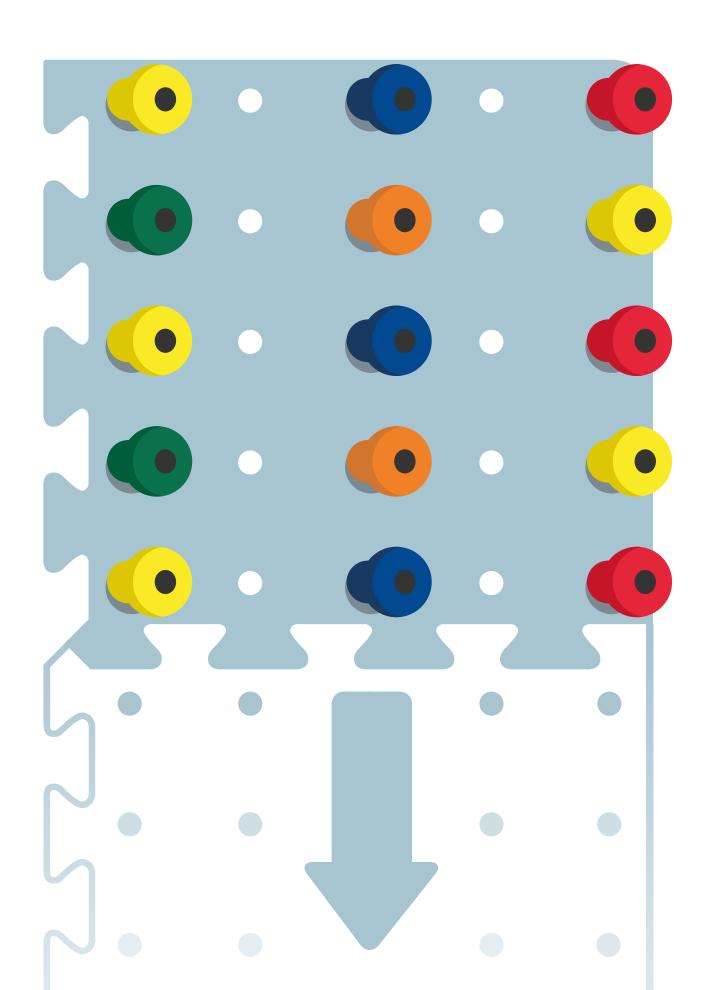




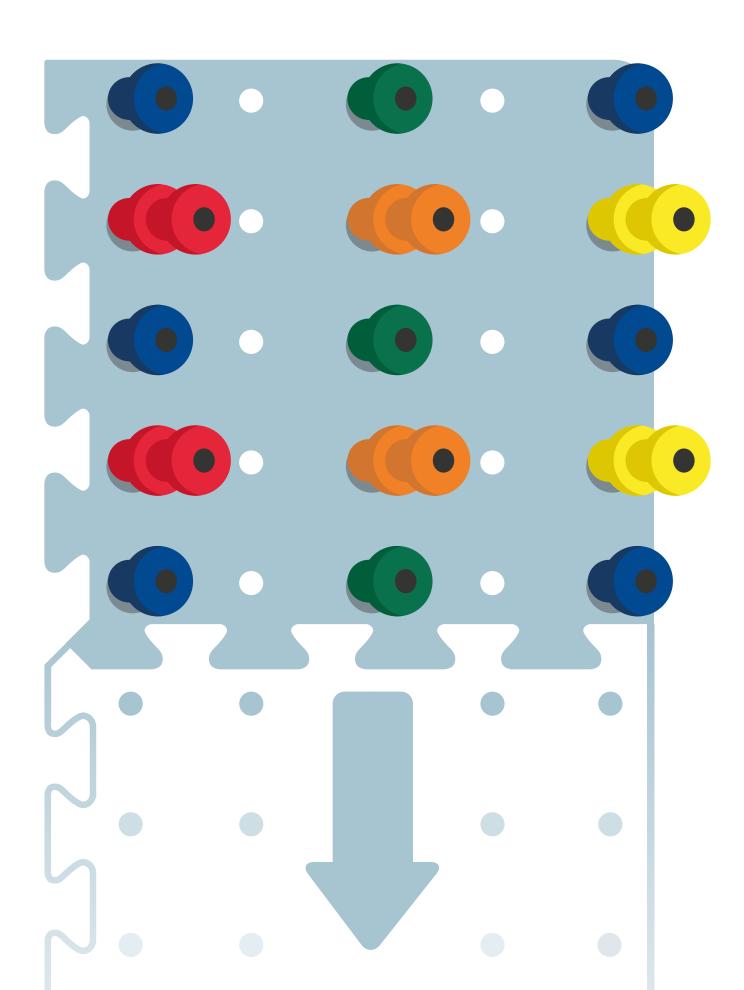




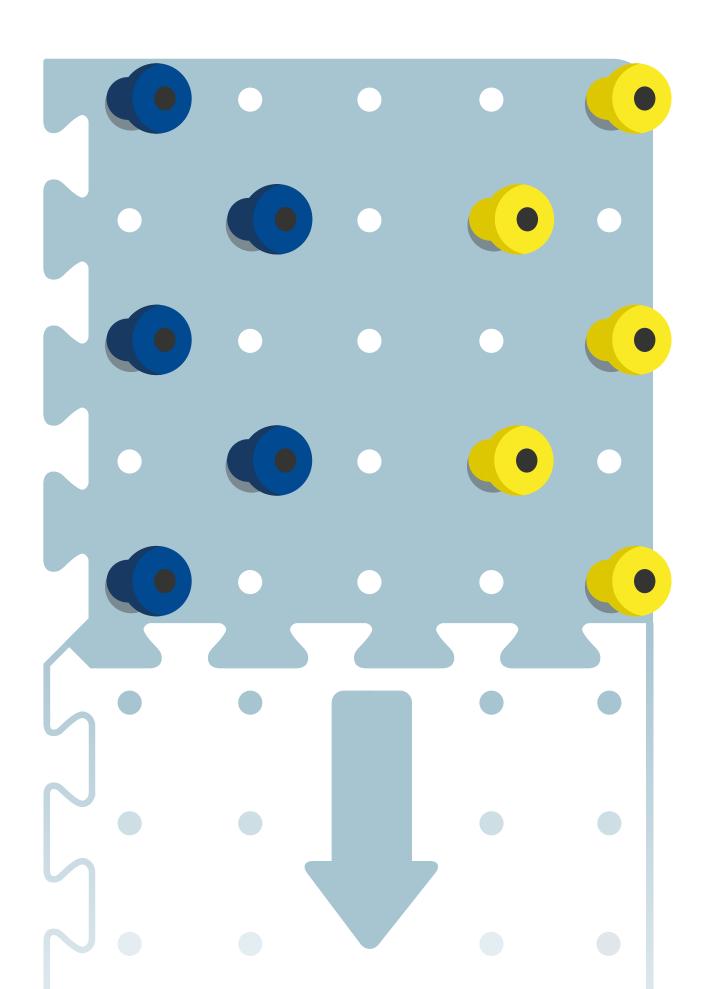




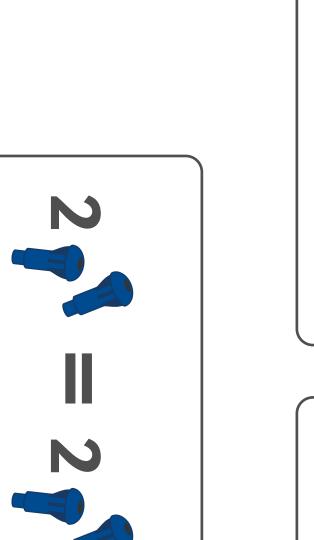


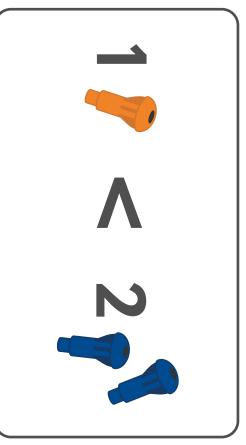


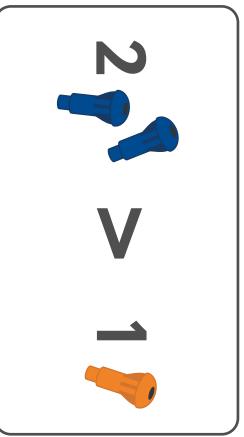




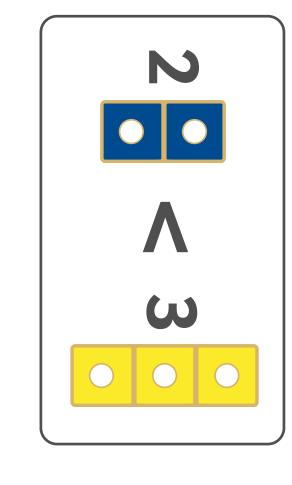


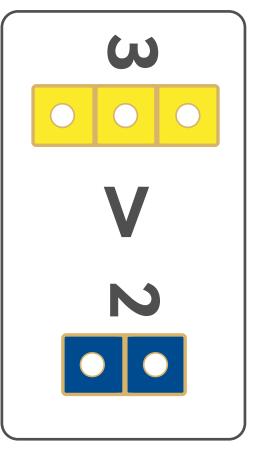


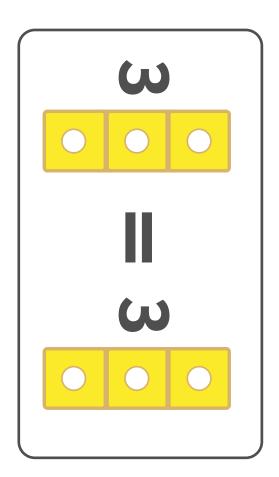






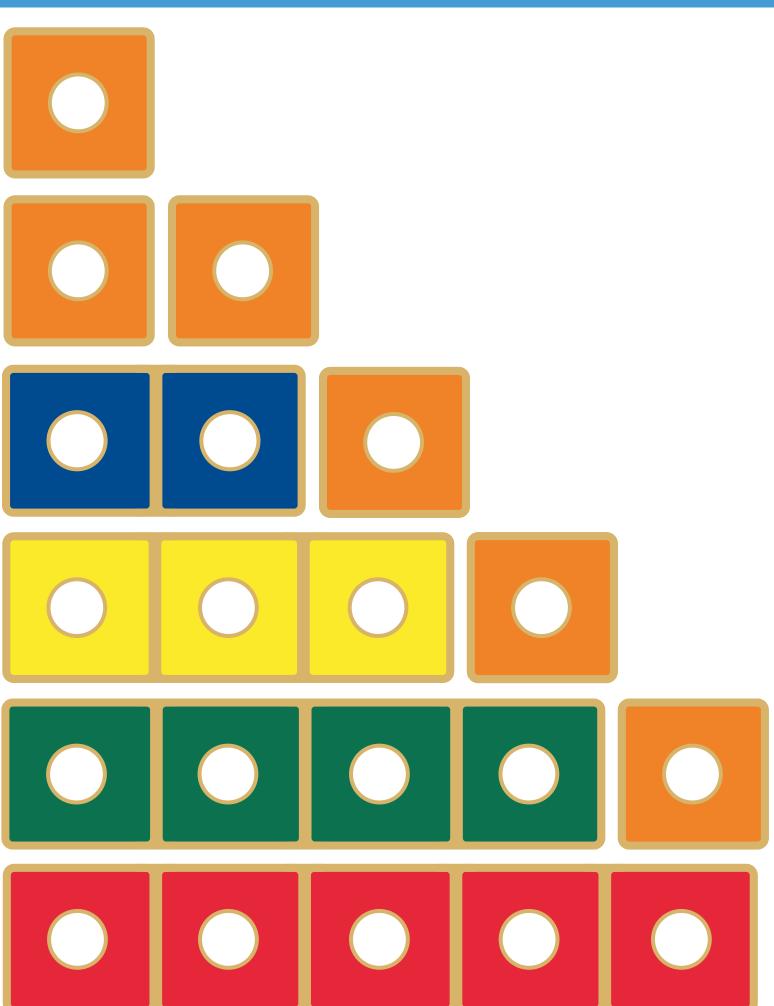




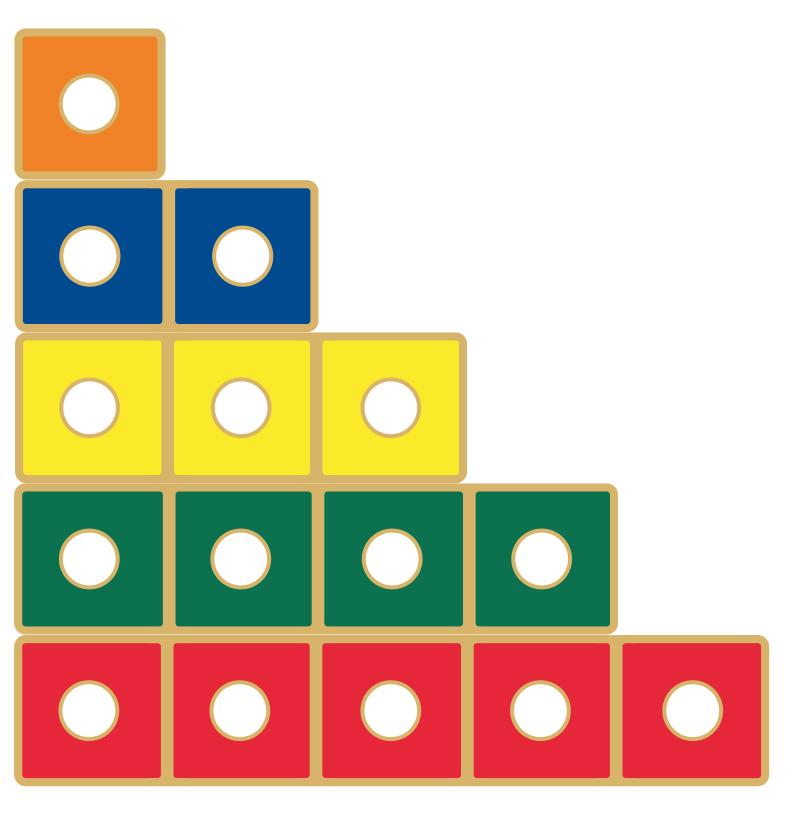




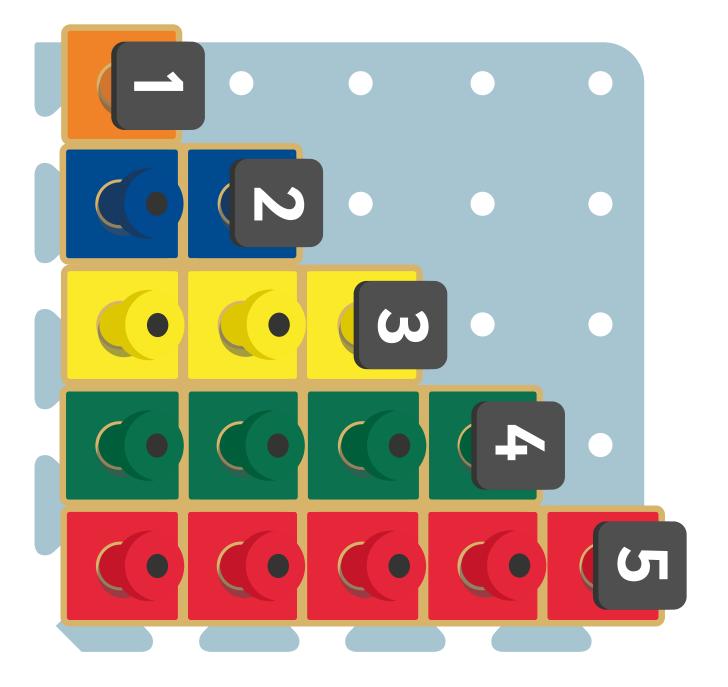
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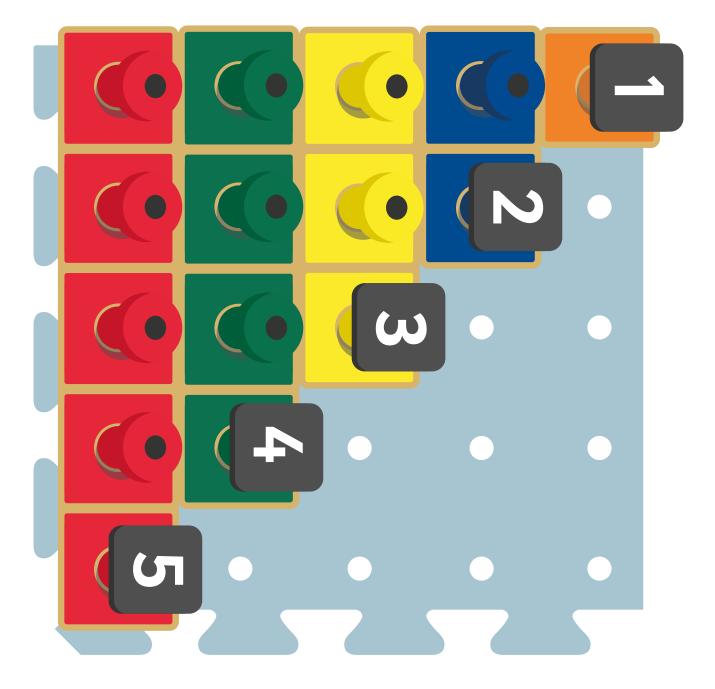




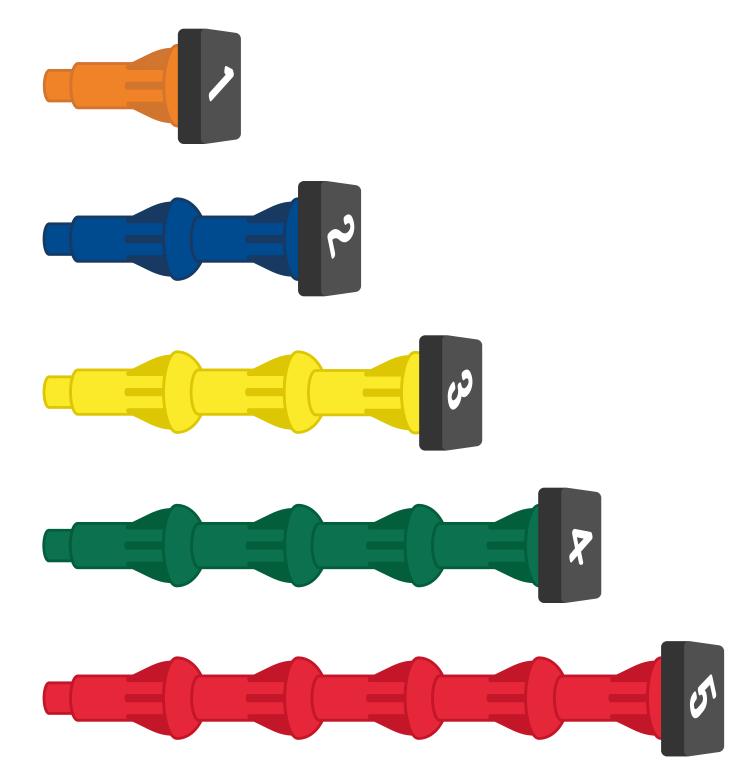








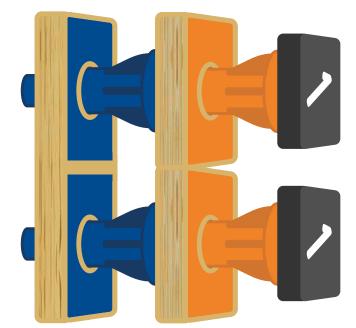


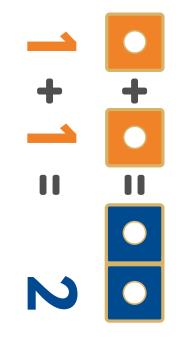




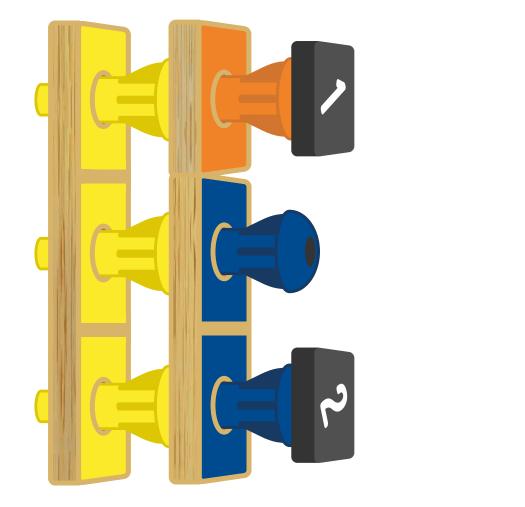


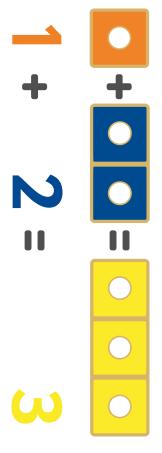




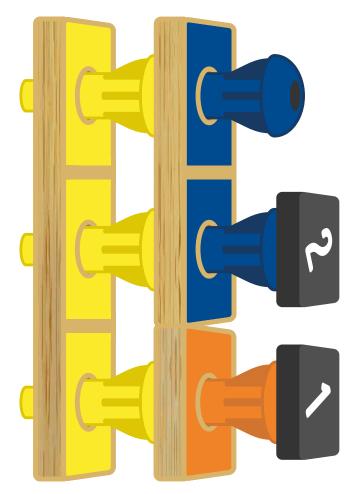


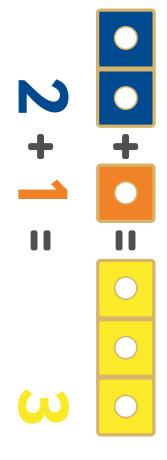




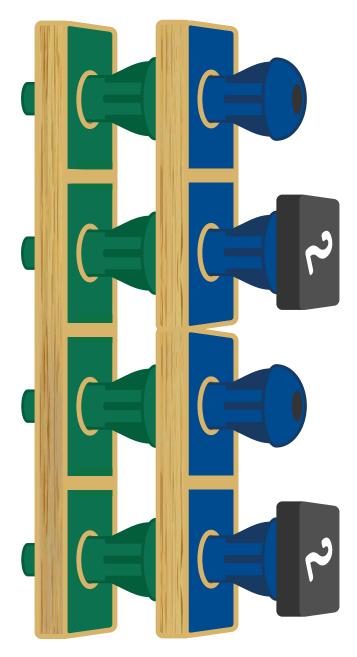




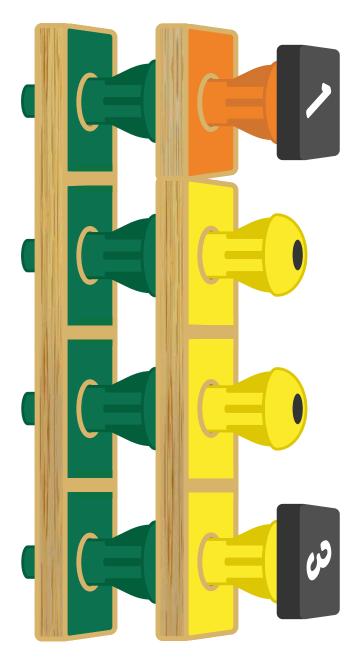


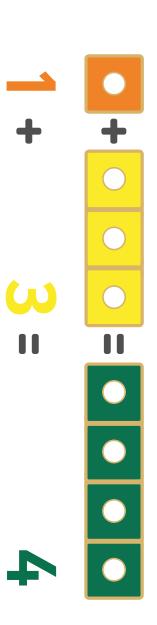




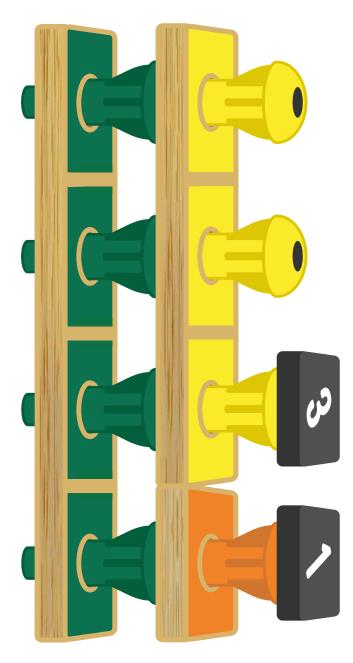




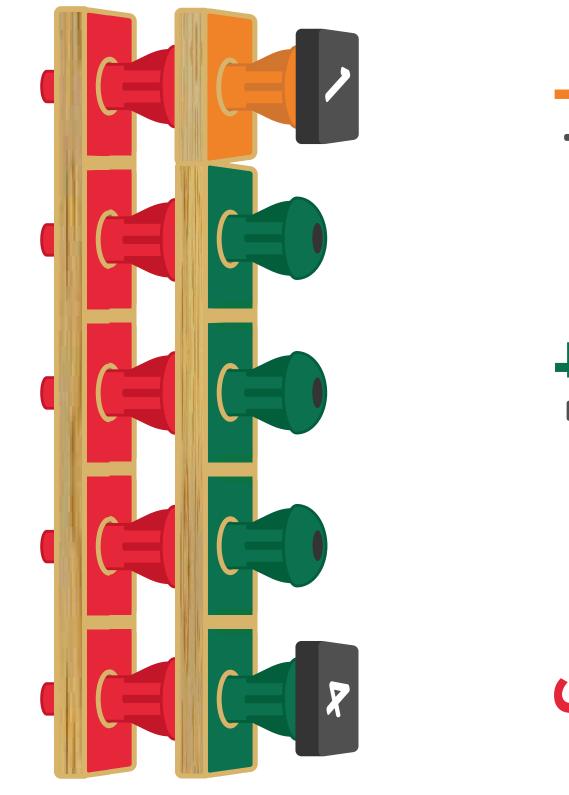






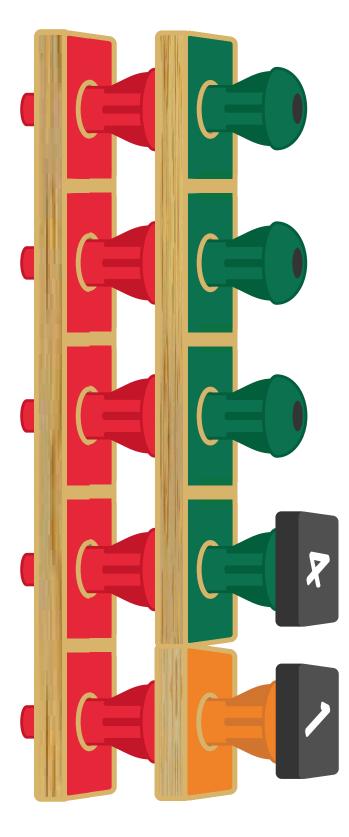




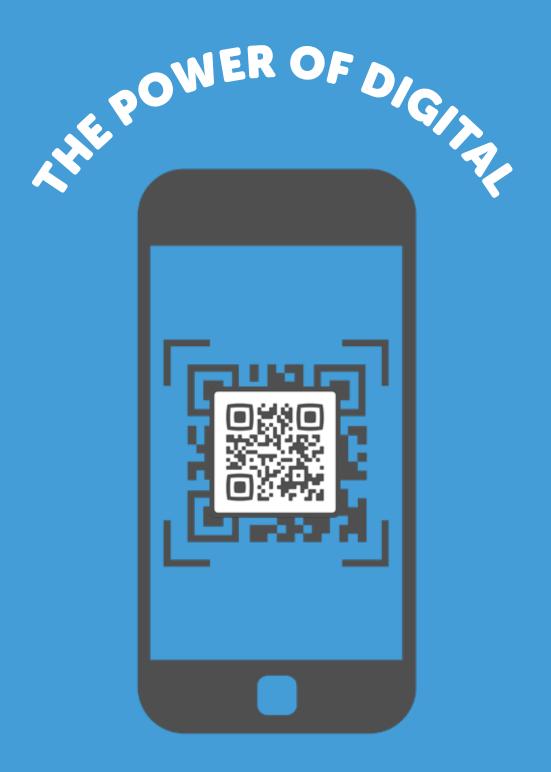


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