HOW TO CREATE
A SEAMLESS PATTERN
IN ILLUSTRATOR TO PHOTOSHOP

Haerae Textile

If you fill a specific area with your pattern for print, the area would be filled with the copies of the pattern as tile work in Photoshop. In that process, if the pattern doesn't fit to each other clearly, tiny gaps that can affect the quality of outcome would appear between the tiles. Therefore, set a repetition of pattern is important when you first create the pattern for the quality of final result.

Step 1 - Preparations for work

In Illustrator

A. File menu ➤
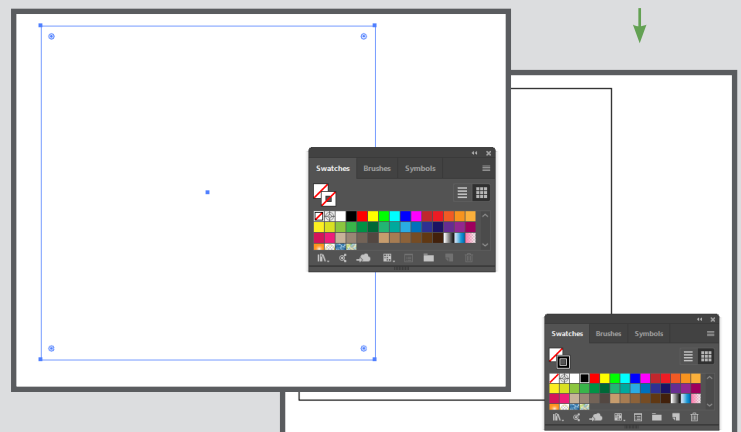Click on New to create a new, blank document
(Command/Ctrl + N)
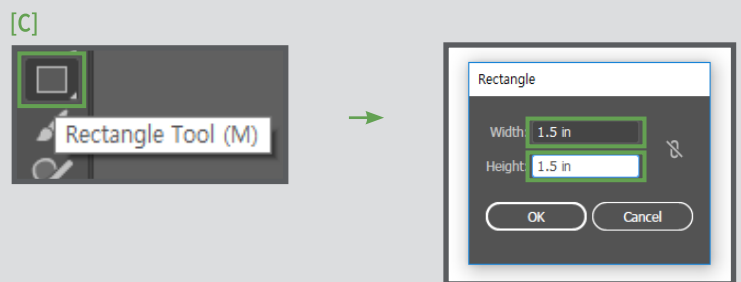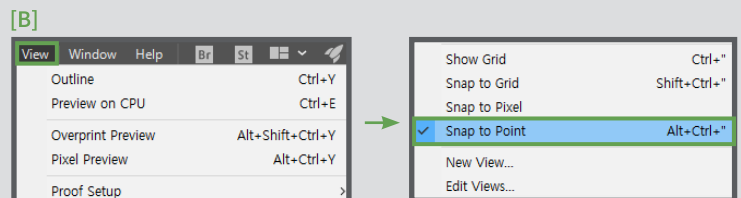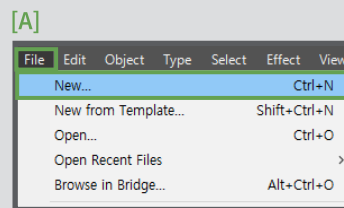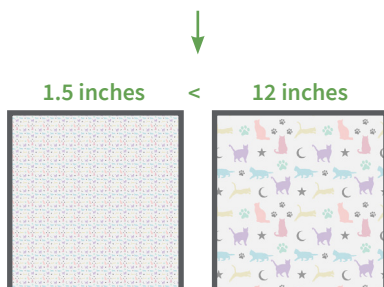
[A]

B. View menu ➤
Make sure that you tick on Snap to Point

[B]

C. Select the Ractangle tool ➤
Click on the drawing area ➤ Enter 1.5 inches for the width and height, and hit OK.
This ractangle will guide the bounding line of your pattern. Make sure that you need to set the Fill to None and Stroke to black for guide line(we'll delete it later).

* You don't have to use 1.5 inch only, you can use any size for the ractangle.(varies by the size of pattern you would like to express)

[C]

1.5 inches < 12 inches

Step 2 - Creating repeated sides of pattern

In Illustrator

A. Let's see example pattern first
Before start making a pattern, please refer to example pattern for final(the square guide line - to help you understand how to repeat the pattern). As you can see, every sides of pattern are repeated through each other. In that process, your pattern could fit in any size of canvas or specific area.

[A]
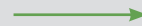
B.Prepare your pattern motifs
- Start drawing or putting your design on only left edge of the bounding line.
- Click one object first, and press Command/Ctrl + C and then Command/Ctrl + Shift + V to copy and paste in place.
- Go to control bar at the top, and type +1.5(depends on square size you set)in X axis and hit Enter. Then you can see that the object is pasted to exactly same position on opposite side. Do the same thing to the rest objects on left edge.
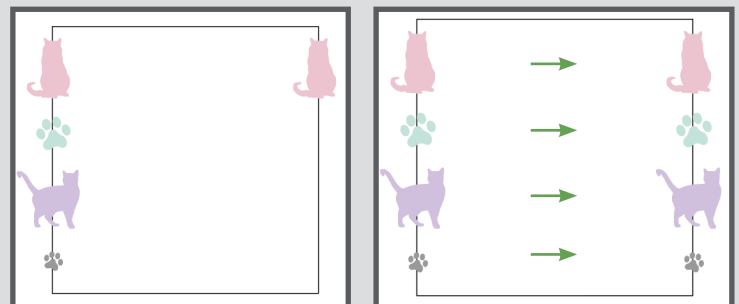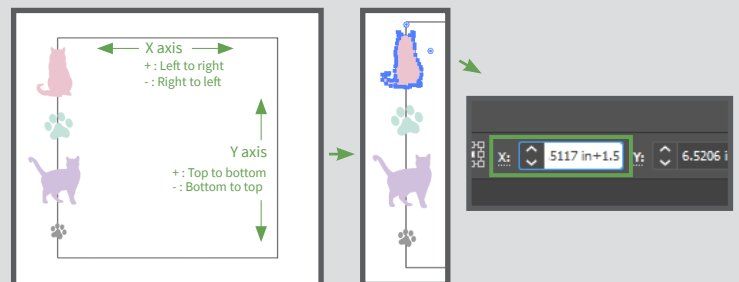
[B]

X axis
+ : Left to right
- : Right to left

Y axis
+ : Top to bottom
- : Bottom to top

X: 5117 in+1.5   Y: 6.5206 i

C. Keep working on the top and bottom sides
- Start drawing or putting your design on top edge of the bounding line this time.
- Click one object first, and press Command/Ctrl + C and then Command/Ctrl + Shift + V to copy and paste in place.
- Go to control bar at the top again, and type +1.5(depends on square size you set)in Y axis and hit Enter. Then you can see that the object is pasted to exactly same position on opposite side. Do the same thing to the rest objects on the top edge.
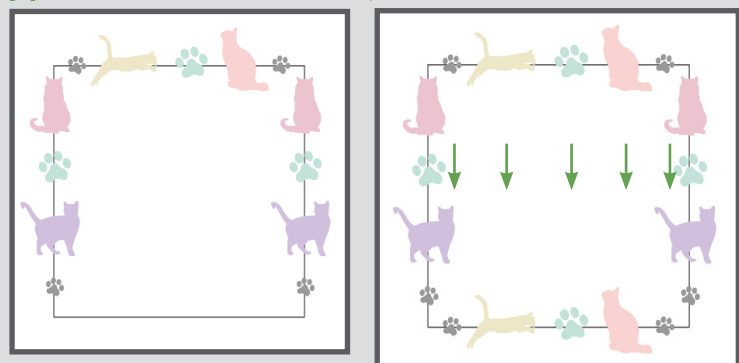
[C]

Step 3 - Finishing pattern design and masking

In Illustrator

A. Working on the rest of pattern designs
Start putting the rest of designs in the middle of the square guideline. This time, you don't need to care about repetition, but need to care about harmony when the whole pattern is repeated.

[A]

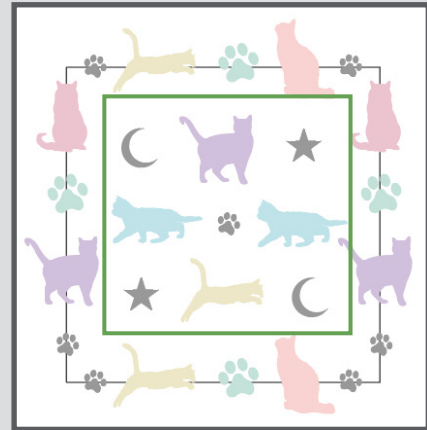**B. Working on background**
If you have background to put on your pattern, click the square guideline. Fill color you want(but set the stroke to None), and make sure you need to arrange the filled square at the back. To do this, right click on the square > Arrange >Send to Back.

[B]

[B]

C. Masking
After that, click on the square and press Command/Ctrl + C and Command/Ctrl + Shift + V to copy and paste in place. This time, set the fill as None, and Bring the square to front. To do this, right click on the square > Arrange >Bring to Front. Finally=, select all the objects, and go to Object menu > Clipping Mask > press Make. Then, you may see your pattern is cropped in a square, and it will be a piece of your final outcome.
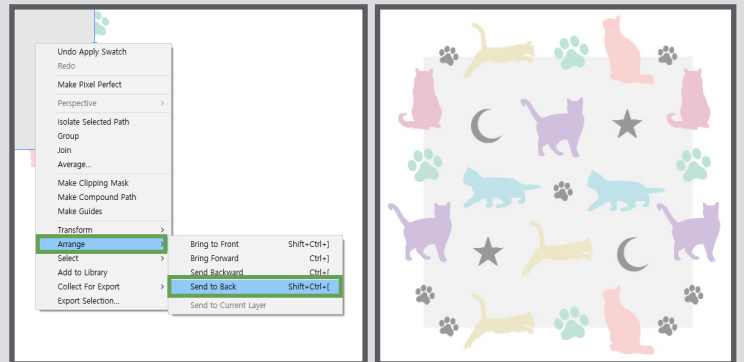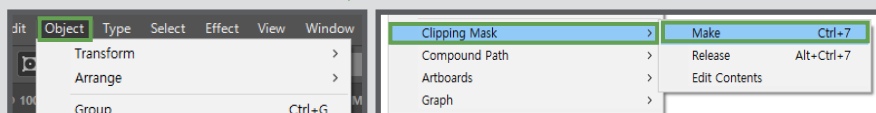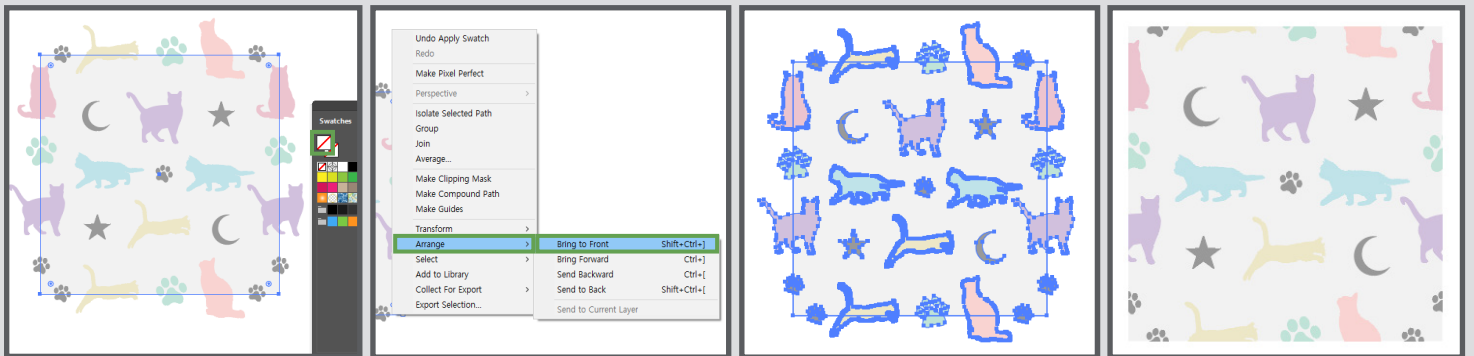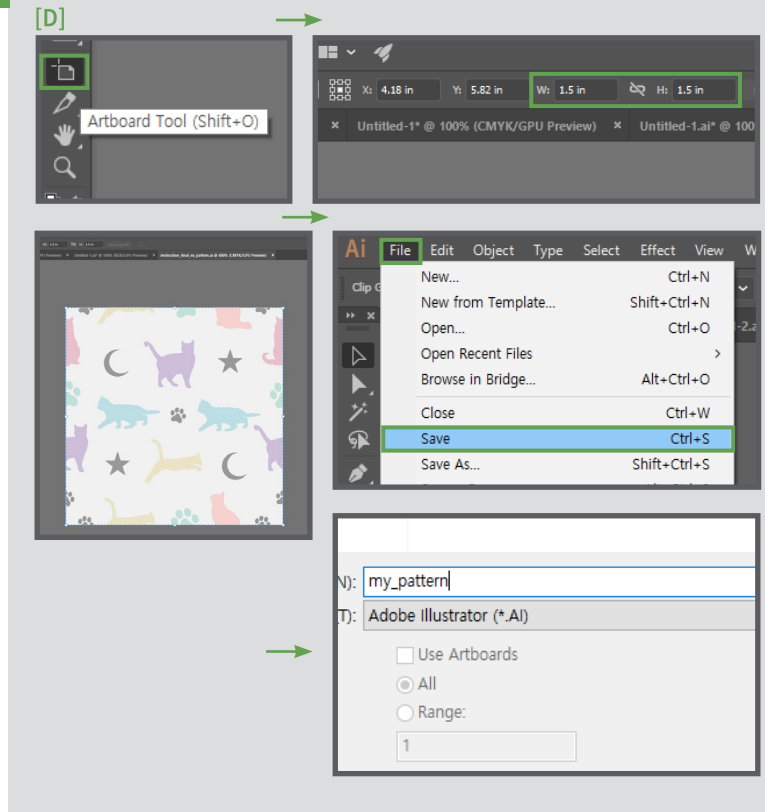
[C]

In Illustrator

D. Saving a file
- Click on Artboard Tool > set the Artboards size to 1.5 in x 1.5 in(depends on your pattern size) > Fit the Artboard and your pattern.
- Go to file menu > hit Save > enter your file name > hit Save button as AI(Adobe Illustrator)file.
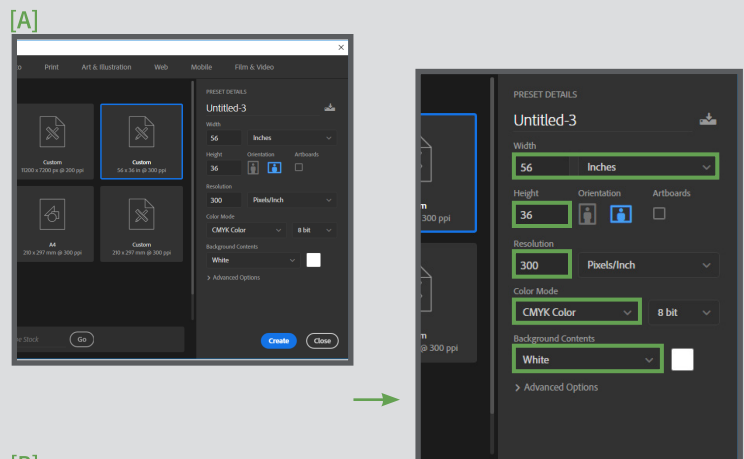

Step 4 - Working in Photoshop - Preparing your pattern file

In Photoshop

A. Size decision and create new document
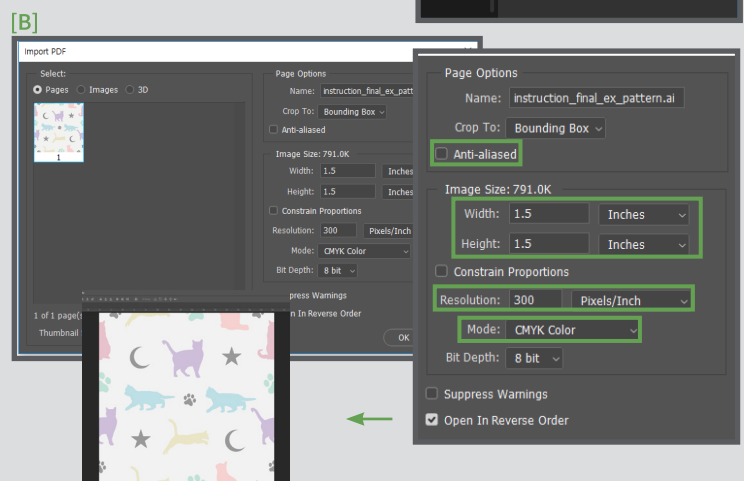Decide the size of fabric you would like to print on. For example, if you are planning to print on 56 in(varies by the type of fabric) x 36(a yard) in size,
Go to File menu > New (or Command/Ctrl + N) then, New Document window will pop up. Make sure that you set the detail as shown on the right image, and hit Create.

B. Open your pattern file
To open your AI pattern file, go to File menu > Open > then, you can see Import PDF window, and make sure you set the details as shown on the right image, and hit OK(*must check that you untick Anti-aliased > it makes your pattern lose one pixel of the edge).

Step 5 - Working in Photoshop - how to fill your pattern

In Photoshop

A. How to fill your pattern accurately
-Define Pattern function
In your **pattern file window**, go to **Edit** menu > **Define Pattern** > set your **pattern name** in the window and hit **OK**. Then, go back to the **document window** you've created at first > **Edit** menu > **Fill**(Shift + F5) > select Pattern for Contents > choose your pattern in Custom Pattern panel > hit **OK** > Then it's your final pattern.

* If you want to make the repetition bigger, you can simply change the size in Illustrator(ex.1.5in x 1.5in > 12in x12in). However, when you set the size, you need to calculate that your size is an **aliquot part** of 36 inches(a yard) to use Fill function.
For example: 1, 1.5, 2, 3, 4, 6, 9, 12, 18
Multiply 1.5 inches by 24 is 36
Multiply 6 inches by 6 is 36
Multiply 12 inches by 3 is 36
In that way, your pattern can fit in the specific size accurately.

*Try not to adjust the size in Photoshop because it may cause lower quality of your graphic.

→ **If you don't want to calculate aliquot parts,** you can simply paste your pattern **up to just over 36 inches**, but it should be **the nearest number to the 36 inches(vertical length).**
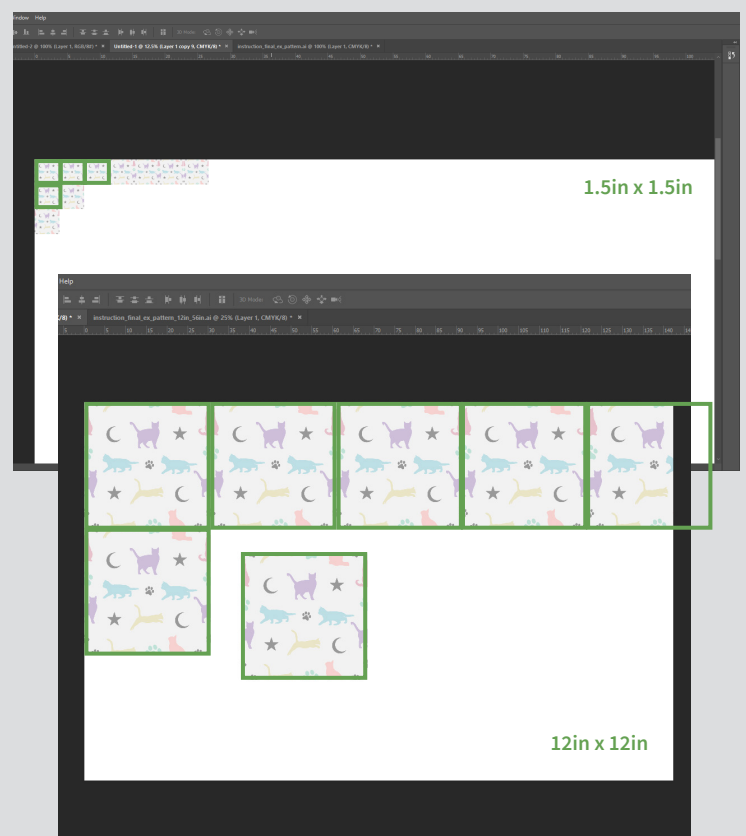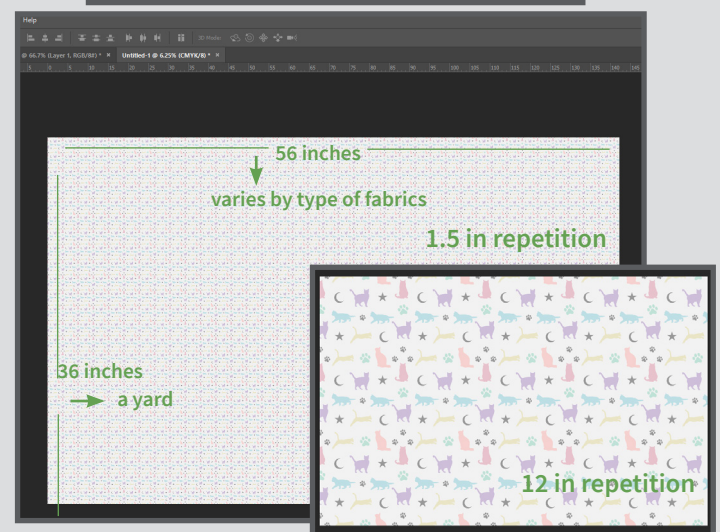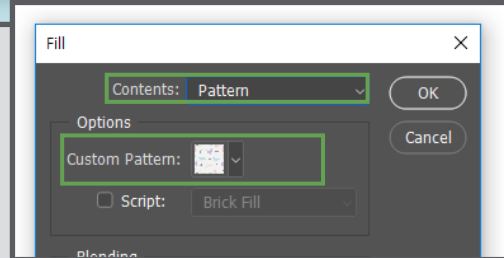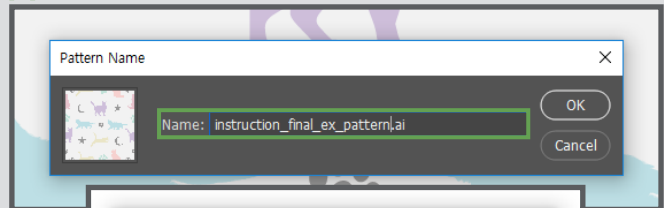
To work on this way,
- Do the same thing in Step.4, but this time, press **Command/Ctrl +A and Command/Ctrl +C** in your pattern file window to select all and copy.
- Then, go to **empty document window**, and **Command/Ctrl +V** to paste your pattern. As shown on the right image, paste and fill the canvas as tile work.
- Make sure that you need to paste the pattern up to **36 inches or over 36 inches(but it should be the nearest number to 36 inches)**for the vertical length.
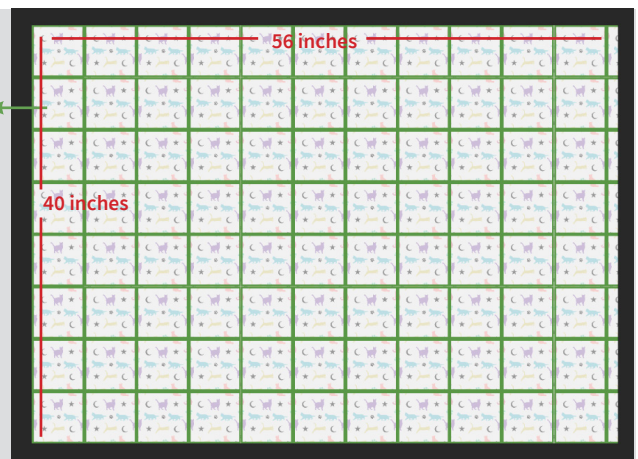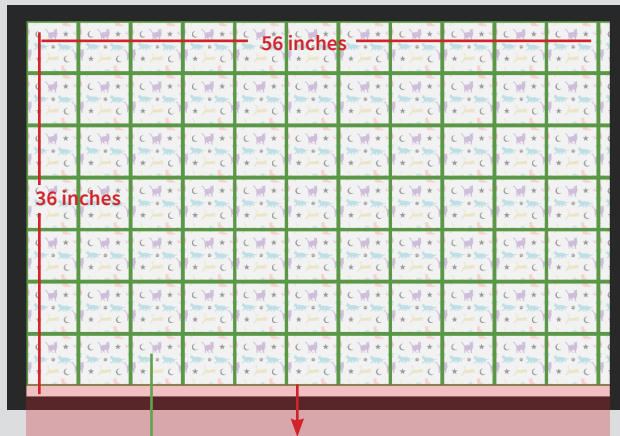
[A]

56 inches

12in x 12in

36 inches

(correct ex)

56 inches

5in x 5in

40 inches

(correct ex)

*You don't need to care about the repetition of horizontal direction.

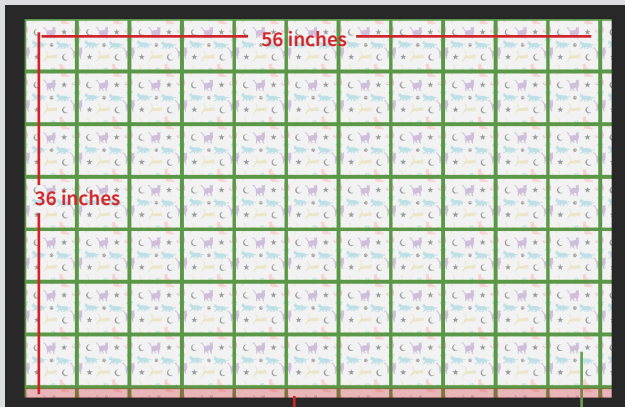56 inches

36 inches

5in x 5in

up to over 36 inches

- 5 is multiplied like 5, 10, 15....35, 40. Therefore, 40 is the nearest number to 36 inches(in case of 5in x 5in).

(incorrect ex)

56 inches

36 inches

shouldn't crop the pattern square

5in x 5in

36 inches(a yard)

56 inches

12in x 12in

Printing Example on Fabric Roll

12in x 12in example

- The process as described above, your pattern will be printed on fabric as shown on the right image.

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