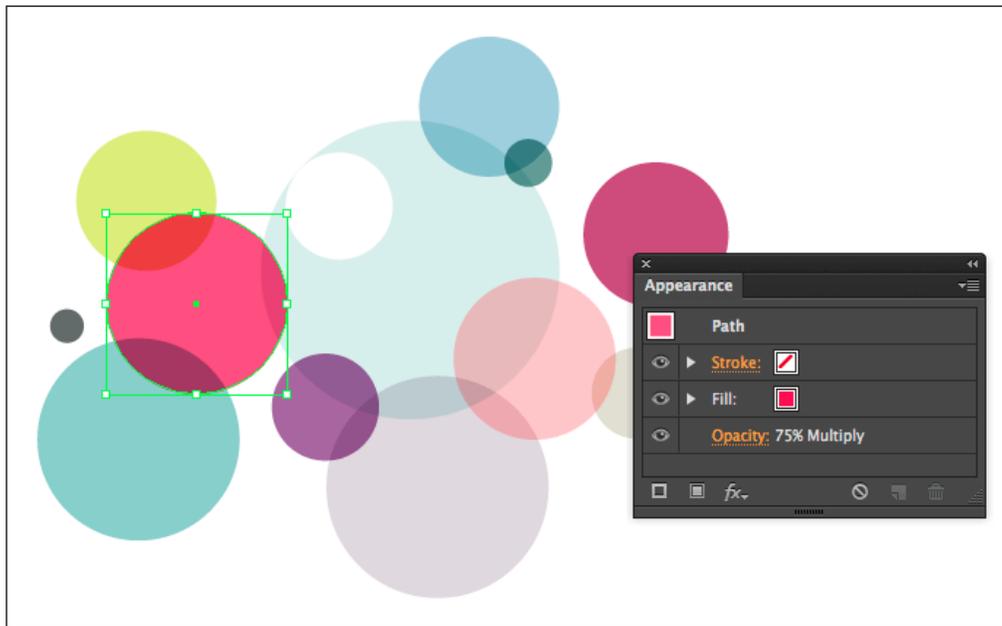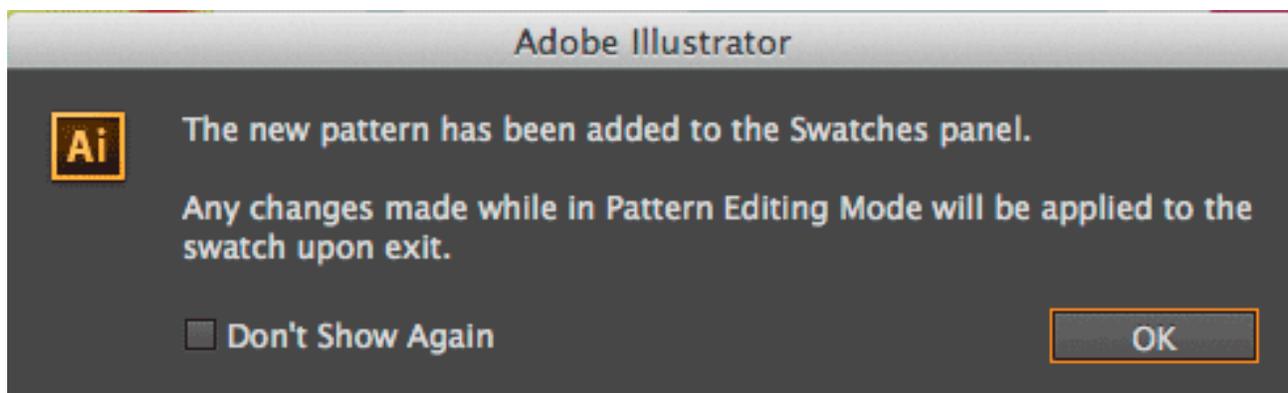**Santiago Canyon College**
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Creating patterns in Illustrator CC

Adobe AI makes it very easy, and flexible to create patterns. There are a lot of options you can try out, which makes this feature very powerful. Let's try it out.
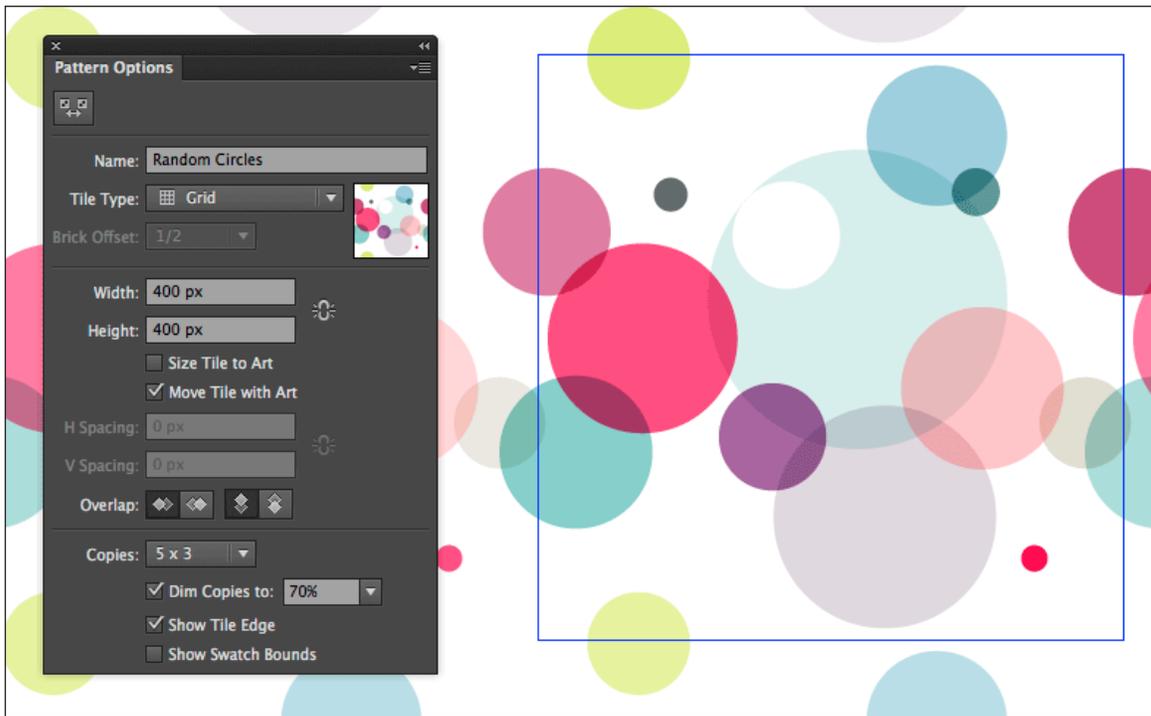
- First start to draw a few random circles. Giving each of them a different size and color. Apply a Multiply transparency effect on all of them and gave them an opacity of 70% to achieve this nice transparency color effect on the overlapping areas.
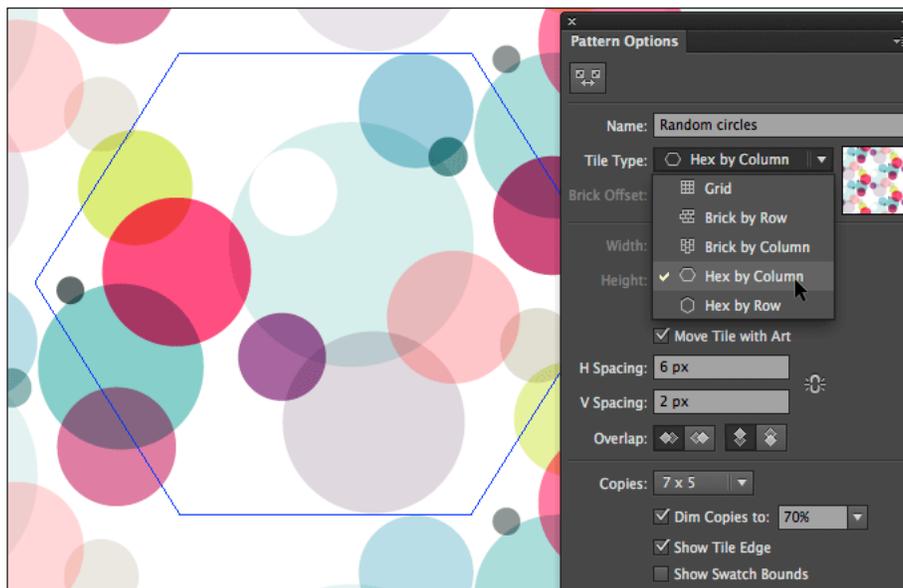
- Once an interesting composition is formed, select all circles, and chose Pattern > Make from the Object menu. Illustrator gives you a warning that the new pattern has been added to the Swatches panel, and that any changes made while in the Pattern Editing Mode will be applied to the pattern swatch upon exit. This is very important to know, because you have the option to edit your pattern at any time. However, if you want to create a new pattern from an existing one, you need to make sure you choose the Save a copy button at the top left of the screen when you are in Pattern Editing Mode.

- Once you click the warning screen OK, Illustrator takes you into Pattern Editing Mode. The beauty of this new mode is that you get to see your pattern in action. You'll see the pattern effect on your entire canvas. By default, you'll see this at an opacity of 70%, but you can adjust this to another percentage if you like. Plus you can control the repetition of the pattern. Notice also the bounding box of your swatch and the pattern tile which you can toggle on and off.

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- You can for instance also choose for a Hex shape which creates a bit more randomness. In this mode you can also move my circles around, and apply other colors. While modifying things you constantly see the pattern being updated. As you can see there are many options that can help you create the pattern you want in no time, without frustration.
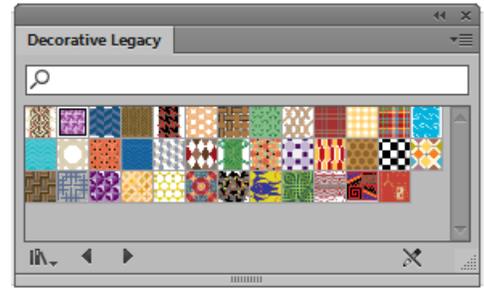

- Once you are happy with the result, you just click Done at the top left of the screen, and you are back in normal mode. If you decide later you want to edit your pattern swatch, you just double click it from the Swatch panel. If you want to create a variation of an existing one, you double click it and as soon as you are in Pattern Editing Mode you click Save a copy at the top right of the screen.

Preset Patterns

AI comes with a large number of preset patterns. To access these patterns, first open up the Swatch panel, in the lower left hand corner, click open the Library. There you can find Pattern. Click on Pattern, there's a flyout menu which gives you Basic Graphics, Decorative and Nature. Which in turn will give you another tier of choices.
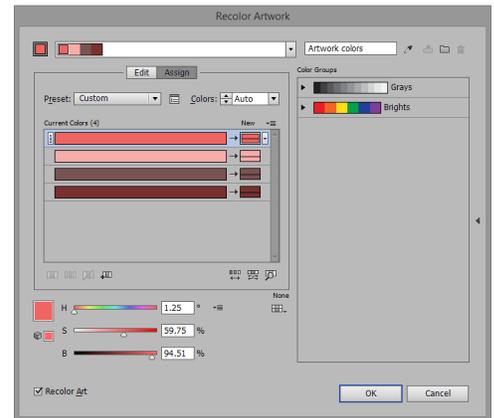
Select any of these preset patterns, AI will add them automatically to your swatch panel.

Recolor/ Break Apart A Pattern / Modify A Pattern

There are a couple of ways to re-color a patten fast.

• With the pattern selected, click the Recolor Artwork icon up in the Control panel. This will open up the Recolor Artwork panel, from where you can recolor the pattern in no time.

• The other way is with the pattern selected, go to Edit>Edit Colors, where you can find quite a few color changing options like Color Balance, or even Invert Colors. You can also choose Recolor Preset, then choose One color jog, 2 color job or 3 color job.

• To break apart a pattern, first with the pattern selected, go to Object > Expand. The pattern is masked. Go to Object >Clipping Mask> Release. Next, you might need to go to Object>Compound Path>Release. You might have to go through these steps several times, plus ungrouping the elements, before you can get to the individual element of the pattern.

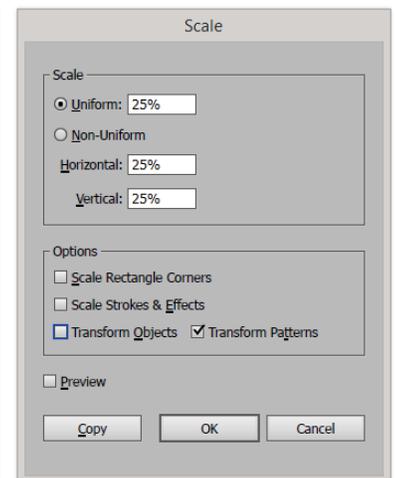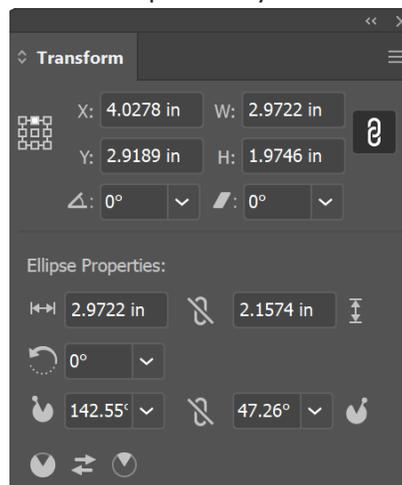• To modify the spacing of a pattern, in the Swtaches panel, double-click to open up the Pattern Options panel.

Scaling a Pattern

To scale a pattern, either to enlarge or decrease the size of a pattern inside a shape, or rotate the pattern without affecting the containing shape, first fill a shape with your desired pattern, then double-click a transformation tool, either Scale or Rotate, in the subsequent dialog box, uncheck Transform Objects. The transformation will then only transform the pattern, leaving the shape alone.

The other method, is with the Transform panel opened, go to the flyout menu, check Transform Pattern Only. Then go back to the Transform panel, change the values of the pattern.
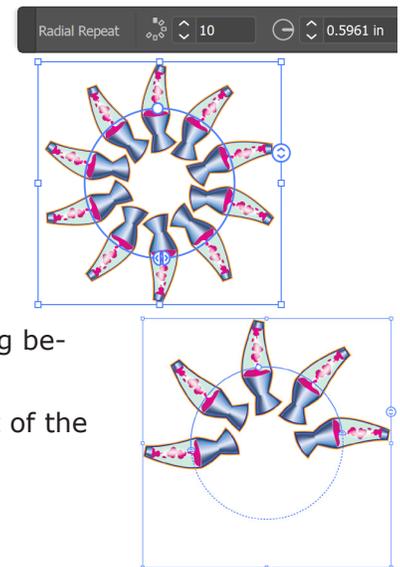
Repeat

Since Illustrator 2021, AI lets you easily repeat objects and manage their styles with using the Repeat Command. All you need to do is to create the object(s) and choose a repeat type. Object> Repeat (Radial, Grid, or Mirror).

There are 3 types of Repeat:

- Radial Repeat: Distribute objects around a central point.
- Grid Repeat: Repeat artwork in a selected gride style. Object>Repeat>Option.
- Mirror Repeat: Create perfectly symmetrical mirror art.

Radial Repeat

1. Create the object(s) and select using the Selection tool.
2. Choose Object > Repeat > Radial.
3. By default 8 instances are repeated. To change the repeat instance count, select the repeated artwork and click the Instances control at the top of the page or go to Object > Repeat > Options.
4. Drag the controls on the circle to change its size. This changes the spacing between the objects, thereby changing the whole artwork
5. Drag the splitter on the circle to remove some instances, keeping the rest of the instances in place.
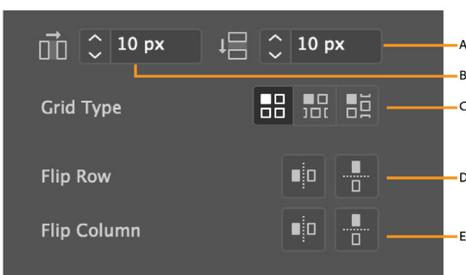6. Drag from the corner to increase or decrease the size of the repeat.

Grid Repeat

1. Create the object(s) and select using the Selection tool.
2. Choose Object > Repeat > Grid.
3. Drag the handle on the bottom to add more rows in the repeated artwork and drag the handle on the right to add more columns.
4. Drag from the corner to increase or decrease the size of the grid repeat.
5. Drag the vertical sliders on the repeated artwork to increase or decrease the spacing in the grid.

To preview and set the grid repeat options:

6. Select the repeated artwork.
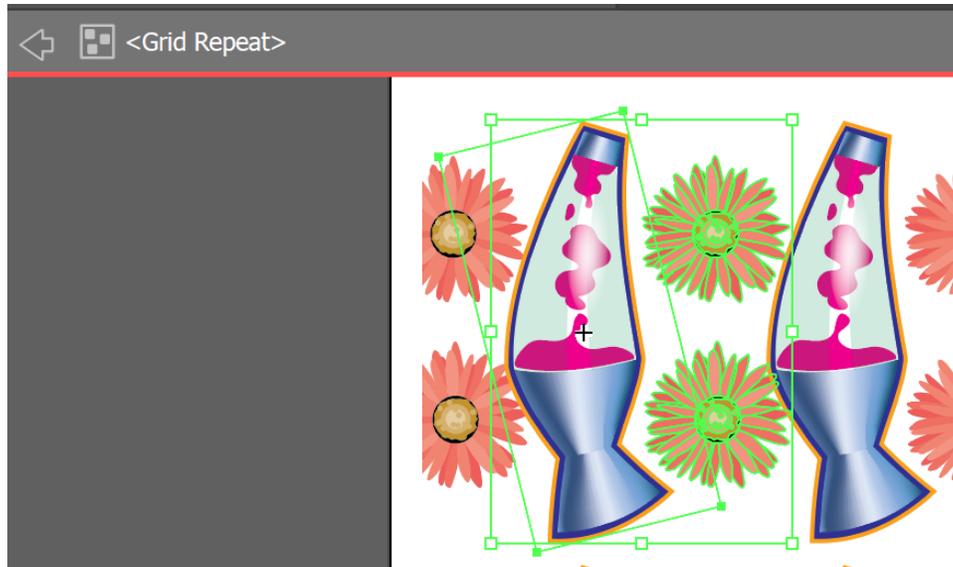7. Choose Object > Repeat > Options. In the Repeat Options dialog that appears, click the Grid tab.

You can set the following options:

A) Vertical spacing in grid: Specify the vertical space between objects in the grid.

B) Horizontal spacing in grid: Specify the horizontal space between objects in the grid.

C) Grid Type: Specify the grid type you want to use to arrange objects in rows and columns.

D) Flip Row: Flip the row in vertical (y-axis) or horizontal (x-axis) directions.

E) Flip Column: Flip the column in vertical (y-axis) or horizontal (x-axis) directions.

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Tip: If you want to edit only a specific shape or object in the repeated pattern of a Grid Repeat, double click the pattern to enter the Isolation mode, and then you can select and edit any individual object. You can even make a duplication of the object by holding down the Alt key and drag.
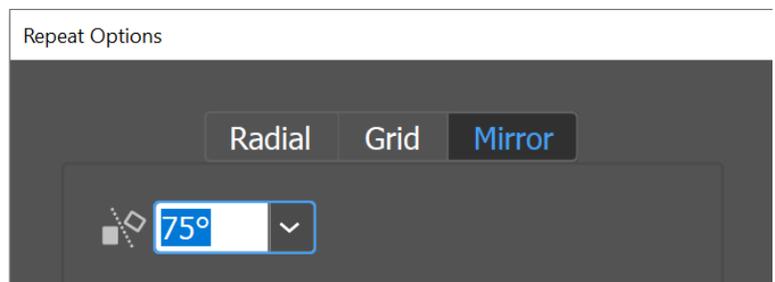

Mirror Repeat

1. Create the object(s) and select using the Selection tool.

2. Choose Object > Repeat > Mirror.

3. Drag the handles below or above the original artwork to rotate or transform the mirrored part.

4. Drag the symmetry axis between the two shapes to control the angle and spacing between the two artwork.

5. When finished, if you click away and then click again you do not see the control handles. Both halves of the artwork are grouped together and move as a single object. To edit them again, double-click the artwork.
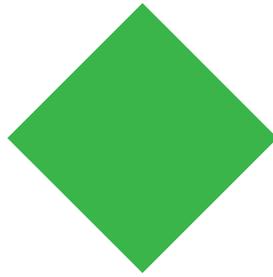
To preview and set the grid repeat options:

6. Select the repeated artwork.

7. Choose Object > Repeat > Options. In the Repeat Options dialog that appears, click the Mirror tab.

8. You can set the angle of the mirror axis. The default angle is 90 degrees.
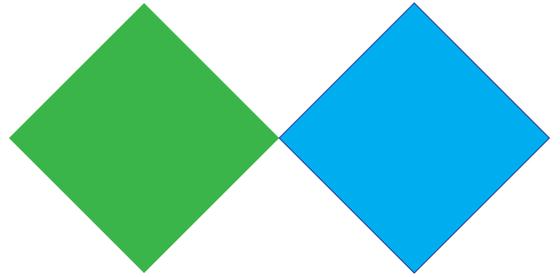

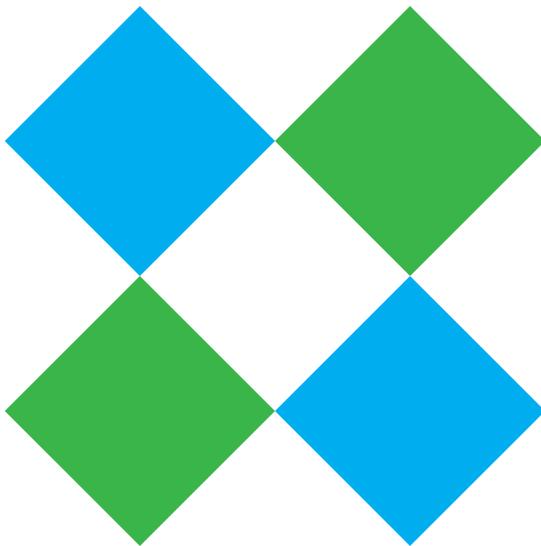To release a Repeat, just go to Object > Repeat > Release.

Select the rectangle tool, draw a 1" square. Hold down the shift key while drawing will constrain the proportion. Fill it with a green color. No stroke.
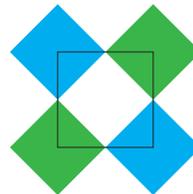
Move the mouse close to an corner node. The mouse will change into a curved double arrow. Hold down the shift key, and turn counter-clockwise once to make it into a diamond.

With the Smart Guide on (View > Smart Guide), hold down the ALT key and drag the green diamond to the right to create another diamond. Make sure their corners touched. Fill the newly created diamond to a blue color.
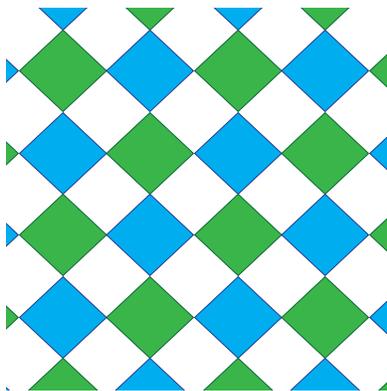
Select all four diamonds. Open the Transform panel (Window > Transform) and change the size to 1" both for the Width and Height attributes.
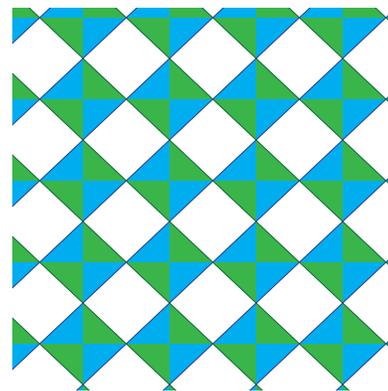Drag the reduced diamonds to the Swatch panel. A new pattern is created.

Draw a square touching the center points of all 4 diamonds, make it no fill and no stroke. Send it to the back by choosing Object>Arrange>Send to back.
Select all 4 diamonds and the square, drag them to the Swatch panel to create another pattern.
The black stroke is for illustration purpose only.

Select both diamonds, hold down the ALT key and drag both diamonds downward to create two more diamonds. Make sure their corners touched. Swap the colors of the newly created diamonds.

Create a 2" square, and fill it with the first pattern you'd just created.

Create a 2" square, and fill it with the second pattern you'd just created.

Holding down the ~ key while you scale, rotate, shear or reflect the pattern, not the shape.