

Chapter- 10:.....

Introduction to Sateen and Satin

The Sateen fabric has a characteristic lustre, sheen on the surface. This chapter introduces the Sateen Weave Design. It will teach the students the ways of representing the same on the Design paper. The production of Sateen requires certain rules. The chapter will introduce the students to these rules. It will teach them to make various regular and irregular structures of Sateen. At the end of the chapter the student will be ready for weaving the Sateen and Satin Weave swatch.

10.1 CONSTRUCTION AND CHARACTERISTICS OF SATEEN /SATIN WEAVE

A sateen weave is predominantly a weft faced weave, whereas satin is a warp dominant fabric. It is constructed by choosing a move number. Selection of move number (intervals of selection) depends upon various factors to get a regular sateen and satin.

Principles of construction of sateen and satin are dependent upon the following rules:

1. A move number selected should not be less one of a repeat size.
2. A move number cannot be allotted as one move.
3. A move number should not be divisible by the number of ends and picks in a repeat.
4. A move number cannot be half of the number of a repeat size

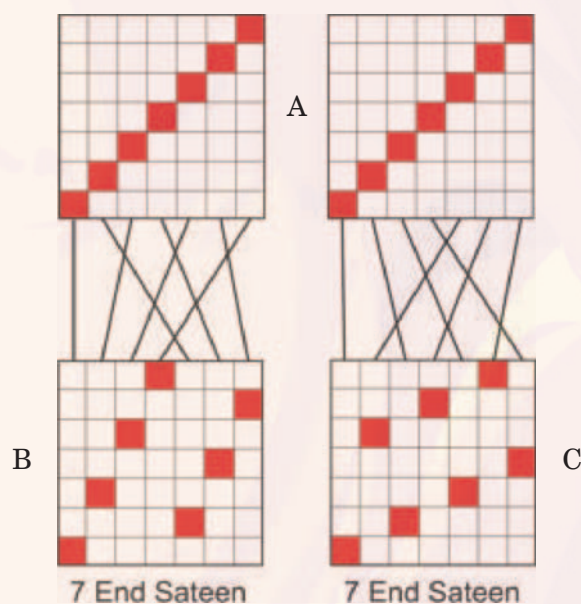


Figure - 20

7 end Sateen at 2 and 5 intervals

A Sateen weave when re-arranged can be made into twill, likewise a twill weave can be rearranged and converted into a sateen weave (weft face satin)

The simplest system of rearranging ordinary continuous twill weaves produces a class of weaves known as '**satin**' or '**sateen**' weaves. These sateen or satin weaves are characterized by an even and smooth surface of either warp or weft, resulting from a perfectly regular distribution of intersection of those threads.

In the **Figure-20B** a **7-end weft faced satin (sateen)** weave is produced from 7-end weft faced twill (**Figure-20A**) by re-arrangement. Exactly reverse of this is when sateen is converted into warp faced and is called **Satin weave**. The interval of selection for re-arrangement may be either of two complementary numbers whose sum equals the whole number, but which have no common measure. Therefore, for 7-end sateen the interval of selection might be 5 and 2 or 4 and 3. In **Figure-B** the interval of selection is 4 and in **Figure-20C** it is 2. Similarly, sateen weaves of higher number of ends per repeat can be constructed by-arranging ordinary twills.

If we reverse the selection in sateen as given above by following the principles of same construction, we will get satin weave which is a warp dominant weave. In **figure 21** the examples of **7 ends satin** with 2, 3 4 and 5 moves and **10 ends satin** is given with 3 and 7 moves.

1.

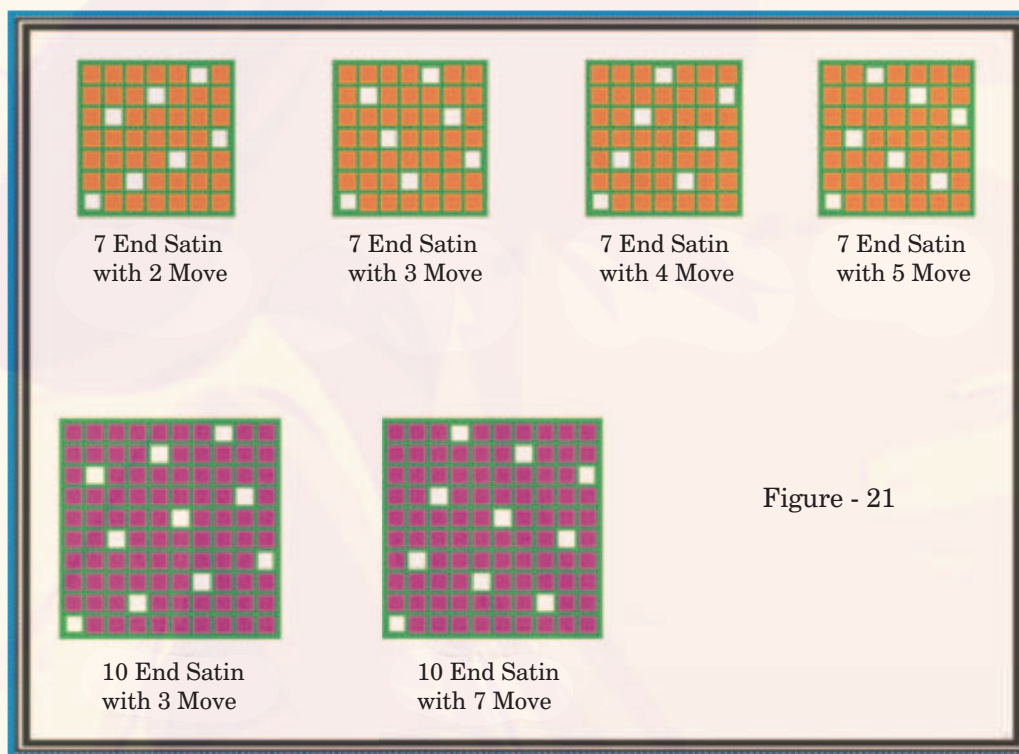


Figure - 21

Summary:

This chapter introduces the Twill Weave Design and its variations. It will teach the students the ways of representing the same on the Design paper and get them ready for weaving the Twill Weave Swatch. The twill weave can be sub-divided in many ways. Each class will produce different types of twill lines. It will also give different effects.



Assignment

1. Take any colour paper/newspaper with or without image cut them in vertical and horizontal direction. Create interesting woven textures by using these as warp and weft by interlacing them in different order. Please refer the woven structure as taught to you.

2. **Answer the following questions**

- Q.1. Define the term fabric?
- Q.2. What are the basic weaves?
- Q.3. what is mean by interlacement, illustrate with an appropriate diagram?
- Q.4. Classify the derivatives of plain weave?
- Q.5. How to identify a twill weave?
- Q.6. How to differentiate between sateen and satin?

3. **Fill Up the blank.**

1. All vertical series in a textile weaving is termed asand is also known as
2. Plain weave with 2 threads in warp and 2 threads in weft is also known as.....weave.
3. Twill fabric can be recognized by its.....lines
4.is a fabric with warp dominant structure.
5. A fabric formed by.....of.....and.....

4. **Choose the correct answer from the given options.**

1. 2/2 twill is an example of a
 - a) Unbiased twill
 - b) Biased twill
 - c) Unbalanced twill
 - d) Balanced twill
2. Sateen is a weave where
 - a) Warp is more dominant
 - b) Both warp and weft is equal

- c) Weft is more dominant
 - d) It produces diagonal lines
- 3. In warp rib the rib formation is in
 - a) Warp direction
 - b) Both warp and weft direction
 - c) Weft direction
 - d) None of the above
- 4. 2 x 2 Mat weave is a
 - a) a derivatives of satin weave
 - b) a derivatives of twill weave
 - c) a derivatives of plain weave.
 - d) Balanced twill
- 5. Left hand twill is also known as
 - a) "Z" twill
 - b) "S " twill
 - c) Upward twill
 - d) Downward twill



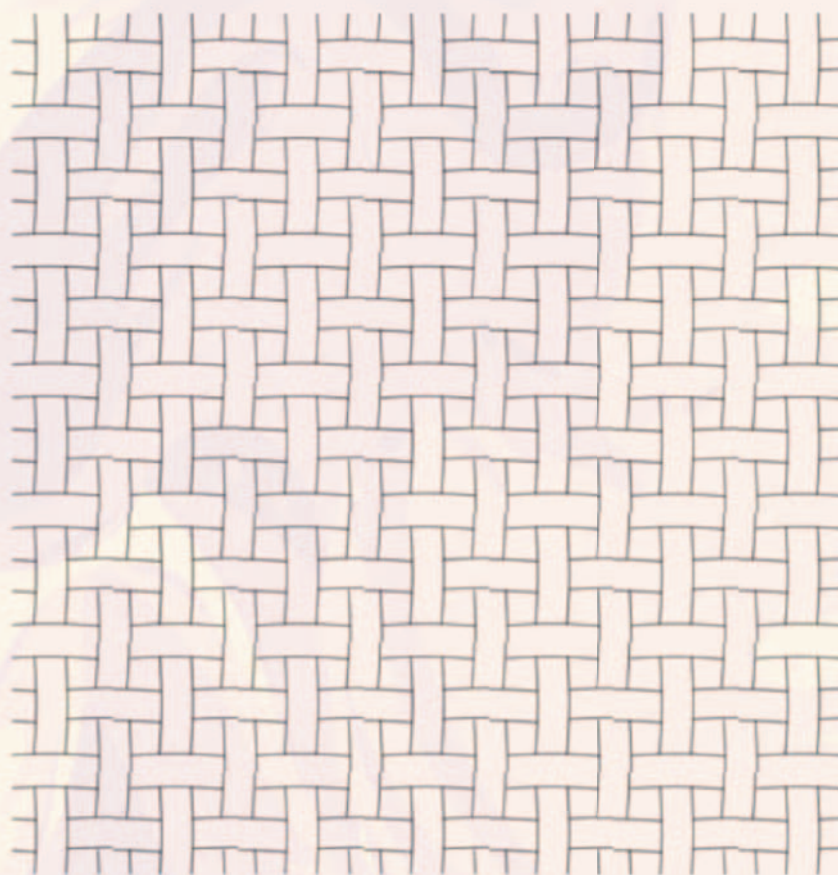
EXERCISES

Exercise 1:

Take any two contrasting colour sketch pen, fill the vertical segments with one colour and horizontal segments with the other colour in the following weave and examine the interlacements of the two elements warp and weft.



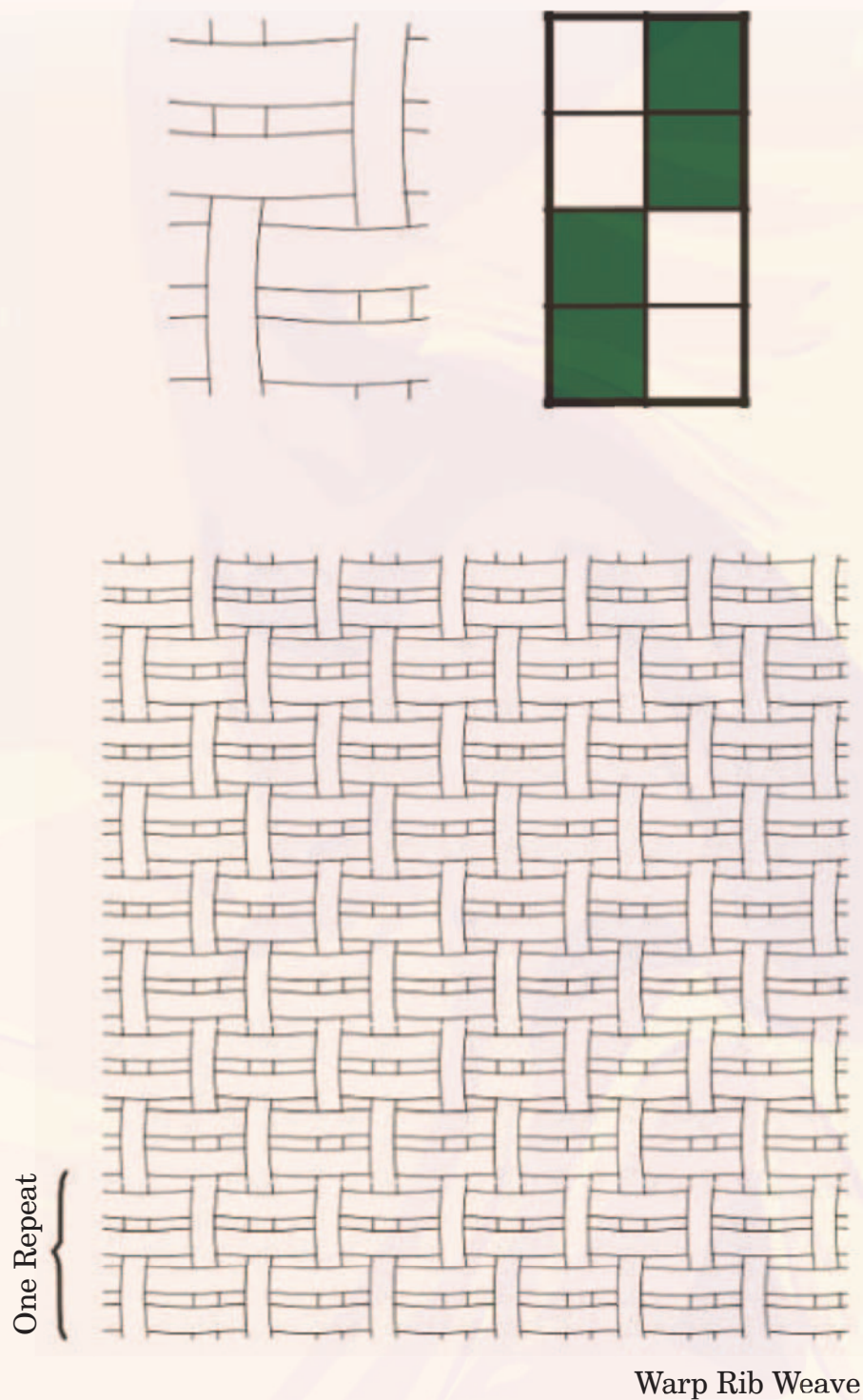
One Repeat



Plain Weave

Exercise 2:

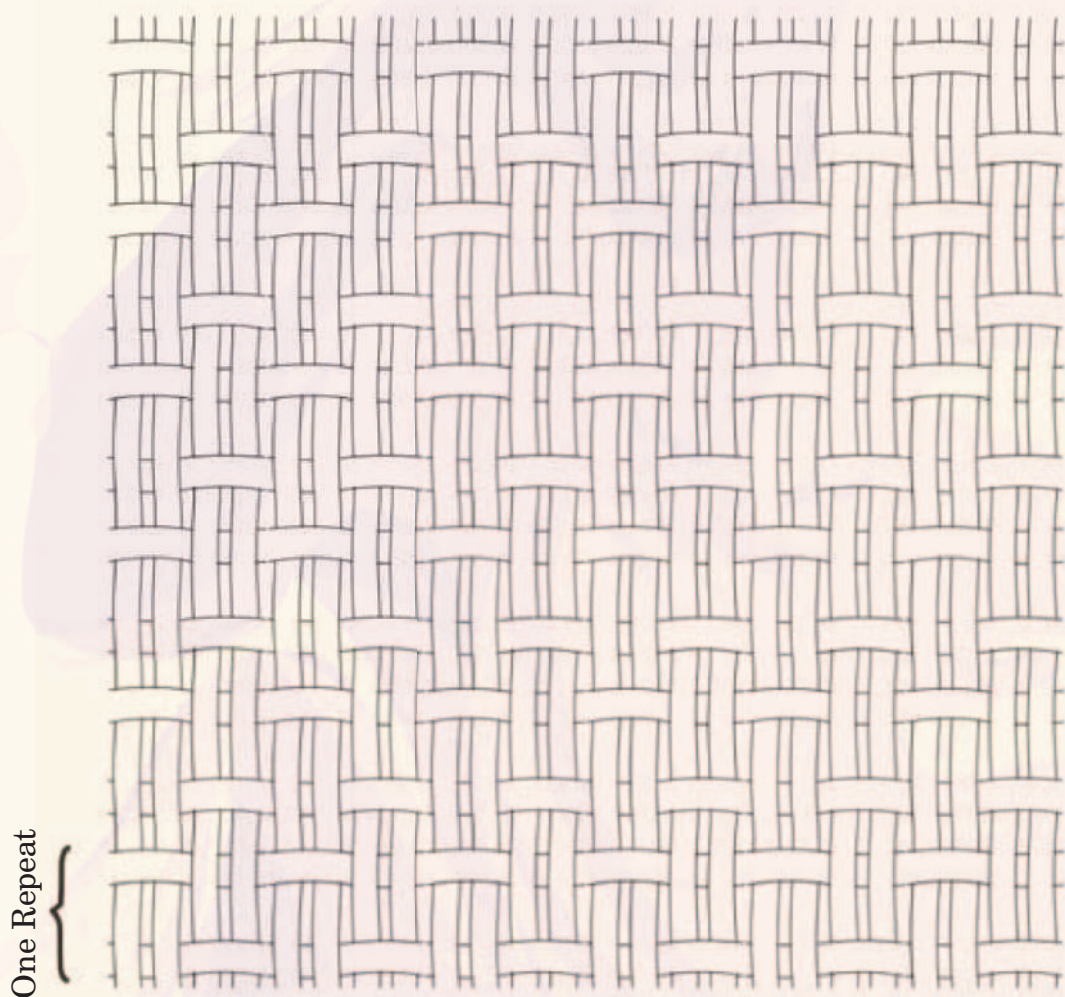
Take any two contrasting colour sketch pen, fill the vertical segments with one colour and horizontal segments with the other colour in the following weave and examine the interlacements of the two elements warp and weft.





Exercise 3:

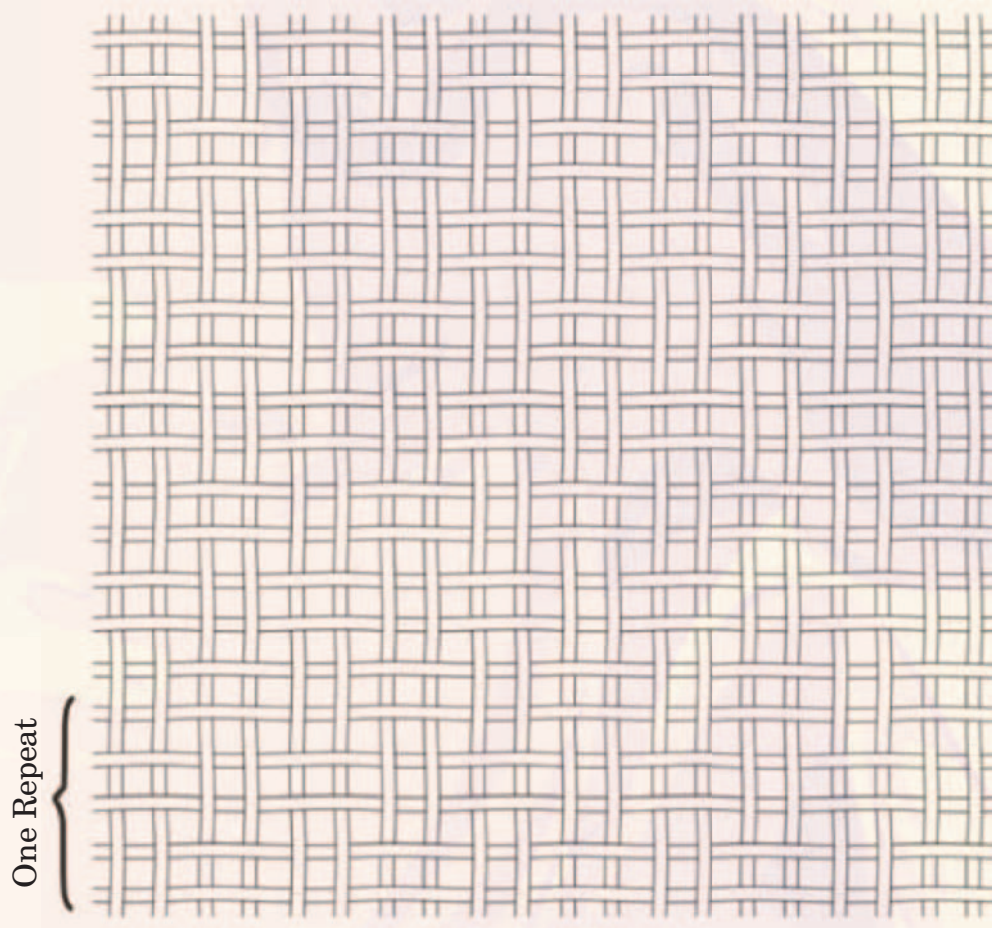
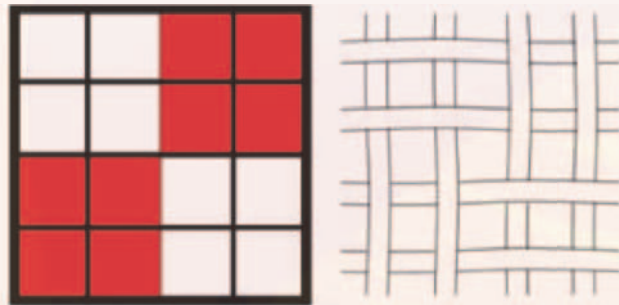
Take any two contrasting colour sketch pen, fill the vertical segments with one colour and horizontal segments with the other colour in the following weave and examine the interlacements of the two elements warp and weft.



Weft Rib Weave

Exercise 4:

Take any two contrasting colour sketch pen, fill the vertical segments with one colour and horizontal segments with the other colour in the following weave and examine the interlacements of the two elements warp and weft.

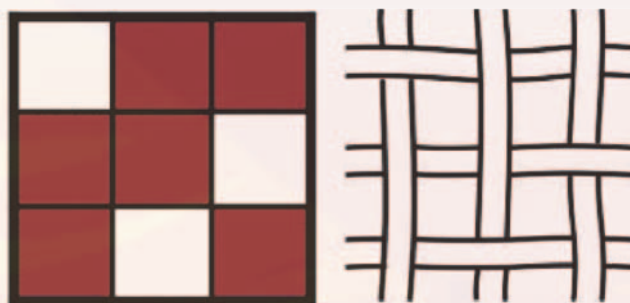


Mat Weave

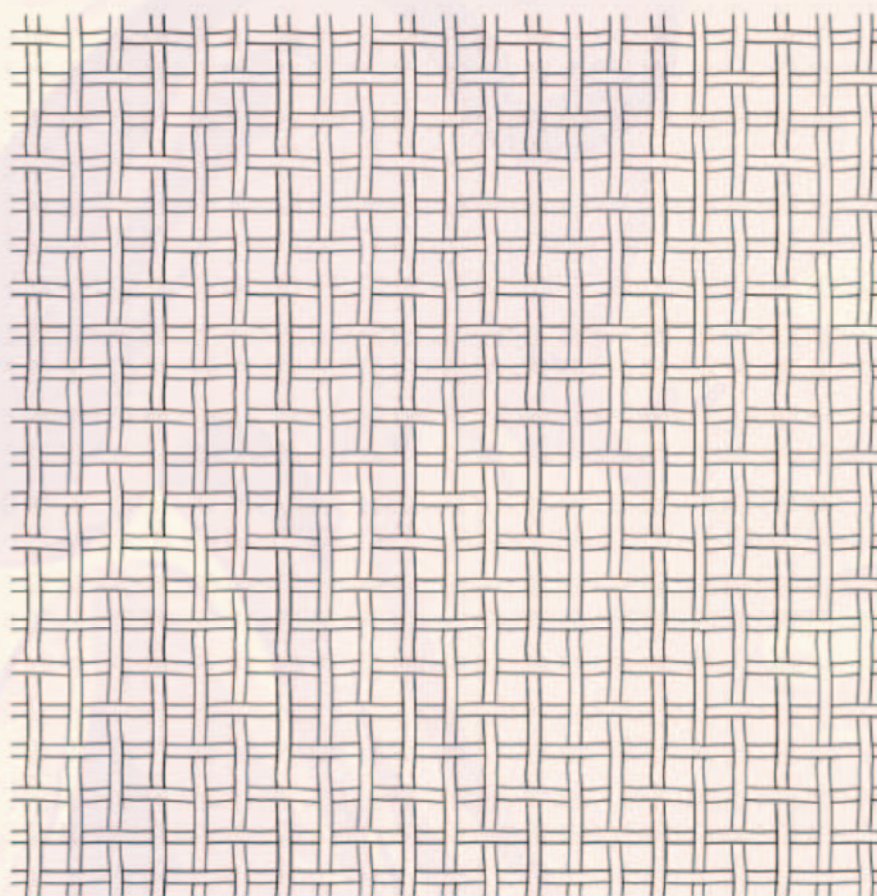


Exercise 5:

Take any two contrasting colour sketch pen, fill the vertical segments with one colour and horizontal segments with the other colour in the following weave and examine the interlacements of the two elements warp and weft.



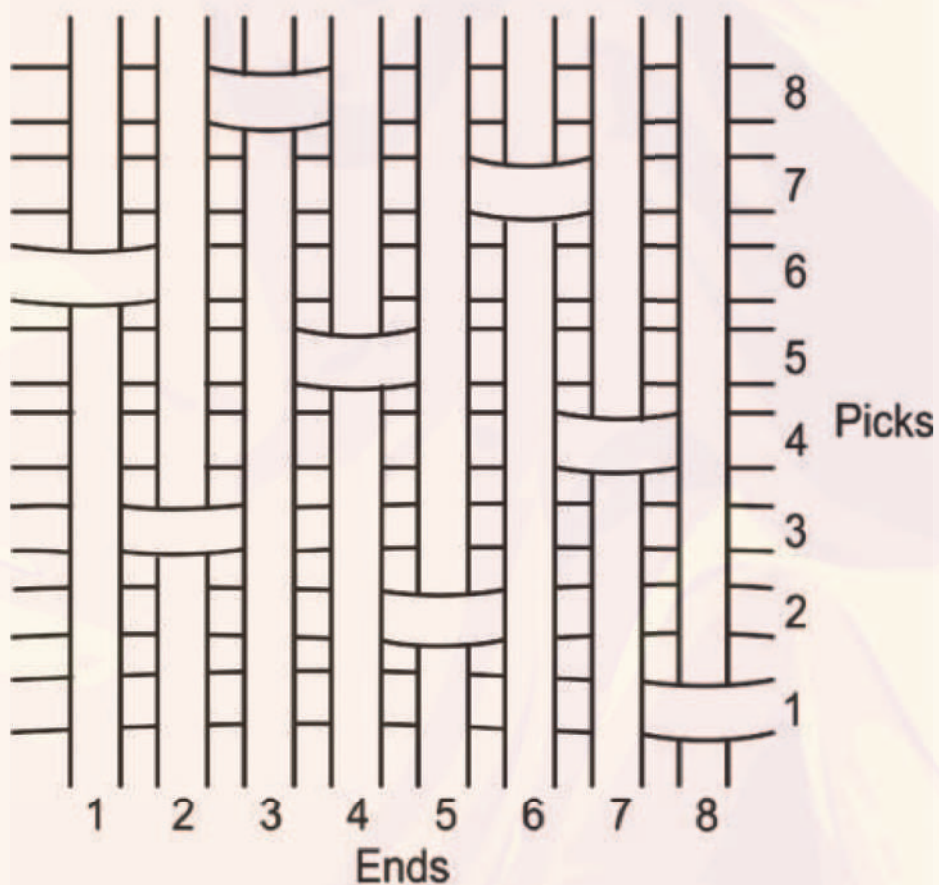
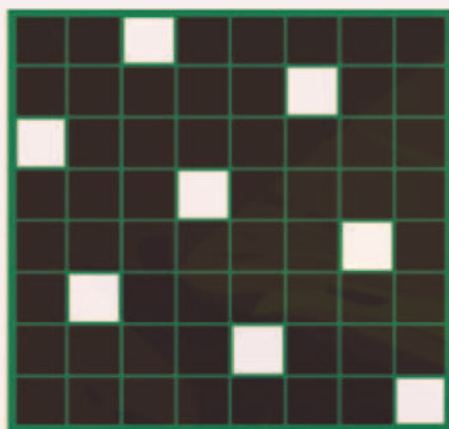
One Repeat {



3 Ends Twill Weave

Exercise 6:

Take any two contrasting colour sketch pen, fill the vertical segments with one colour and horizontal segments with the other colour in the following weave and examine the interlacements of the two elements warp and weft.



8 End Satin Weave