

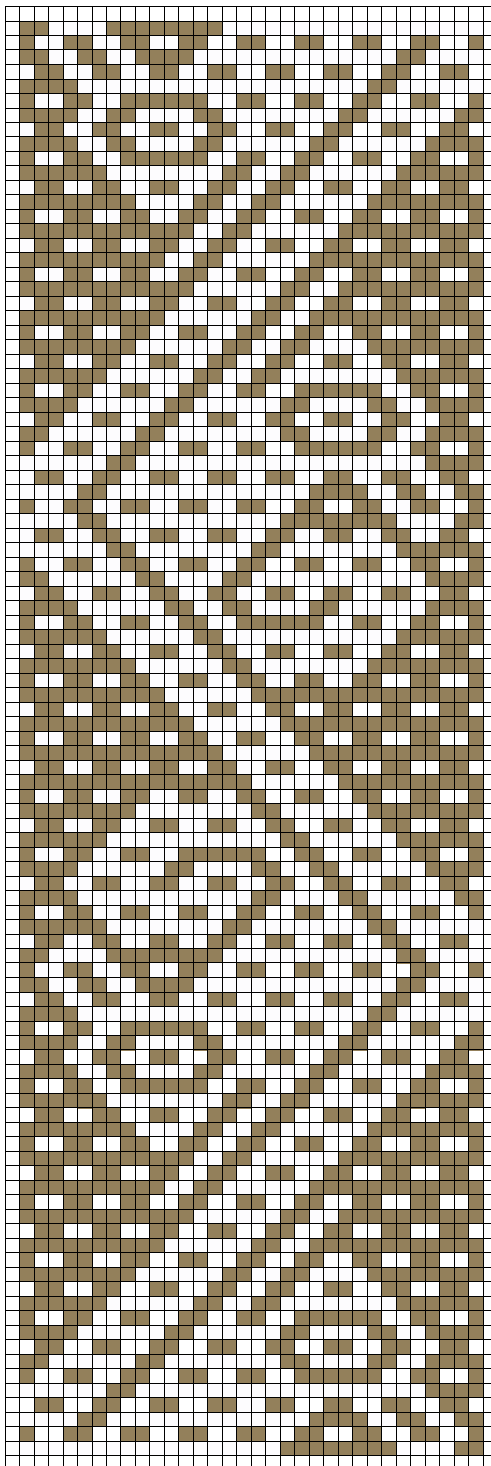
ANDEAN WEAVING
ON A 4-SHAFT LOOM
WITH DIRECT TIE-UP
BOOK 2



ELWYN KENN

PEBBLE WEAVE ON A 4-SHAFT LOOM

WEAVING A BAND WITH A DARK BACKGROUND AND LIGHT PATTERN



32



Adapted from a pre-Columbian textile

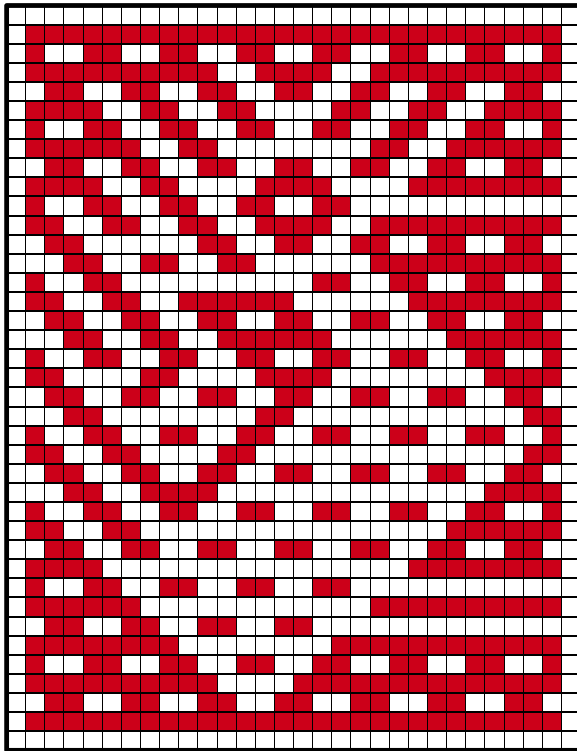
PEBBLE WEAVE ON A 4-SHAFT LOOM

WEAVING A BAND WITH A DARK BACKGROUND AND LIGHT PATTERN

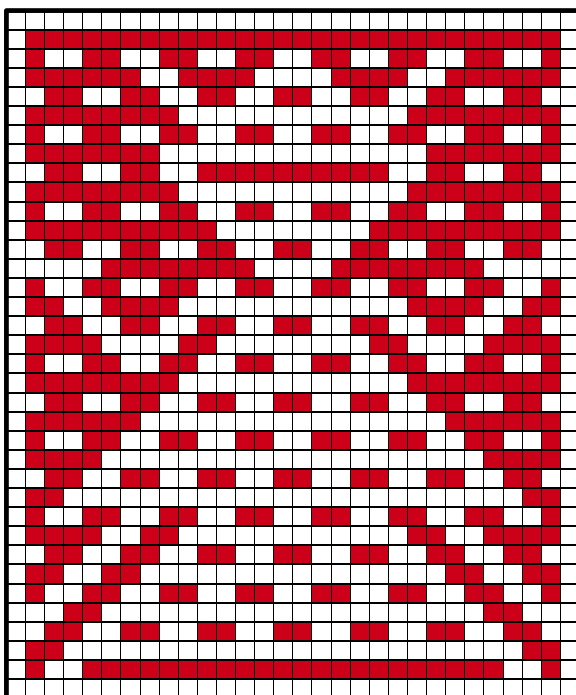
WARPING

For the borders wind 4 Blue, 8 Light Blue and 4 Blue single warps.

For the pattern area 28 Coral and 28 White warps are wound together.

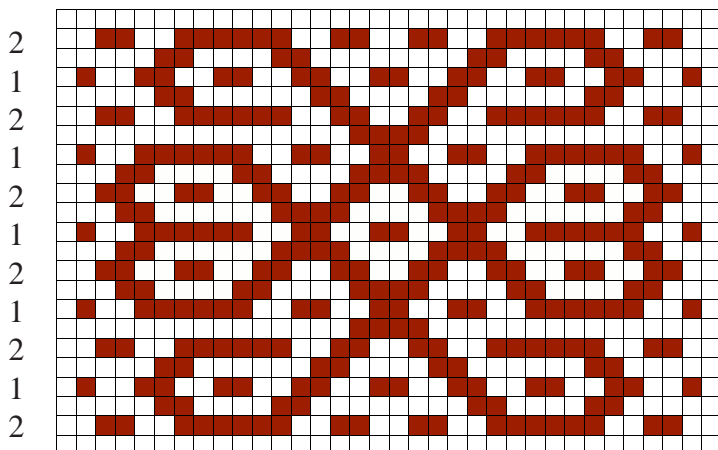
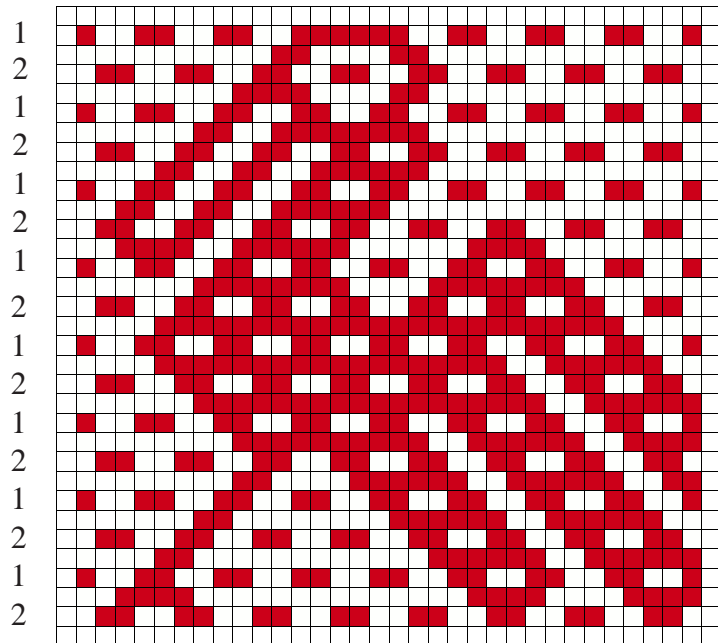


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PEBBLE WEAVE ON A 4-SHAFT LOOM

WEAVING A BAND WITH A LIGHT BACKGROUND AND DARK PATTERN



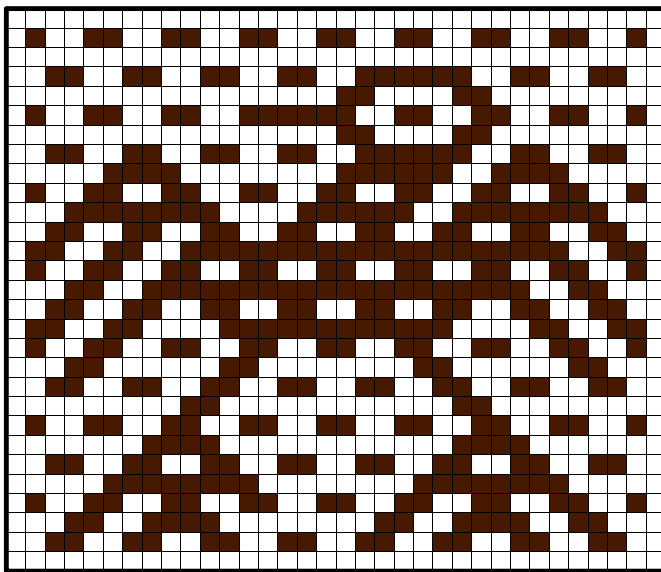
PEBBLE WEAVE ON A 4-SHAFT LOOM

WEAVING A BAND WITH A LIGHT BACKGROUND AND DARK PATTERN

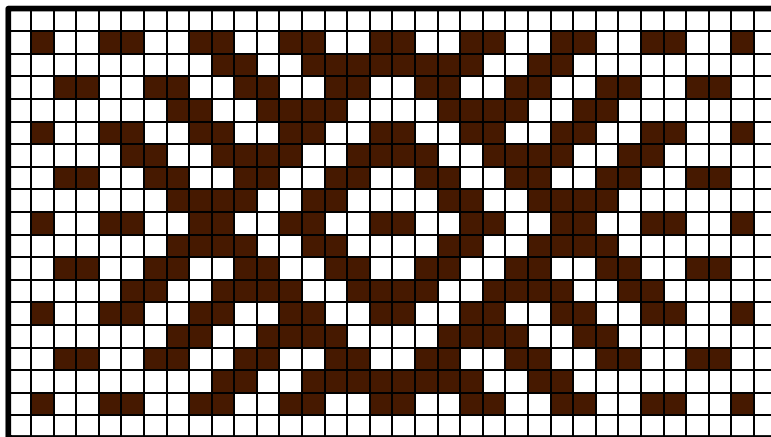
WARPING

For the borders wind 12 Coral single warps.

For the pattern area 32 Brown and 32 White warps are wound together,

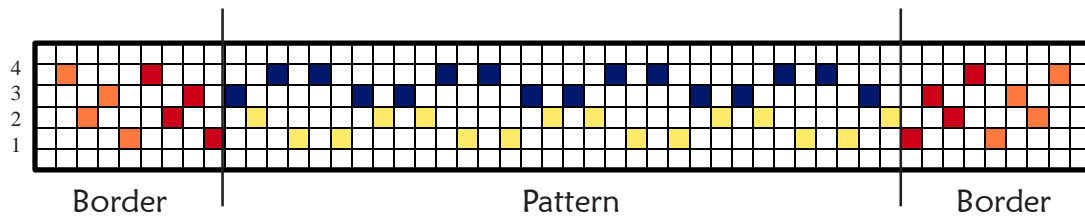


32



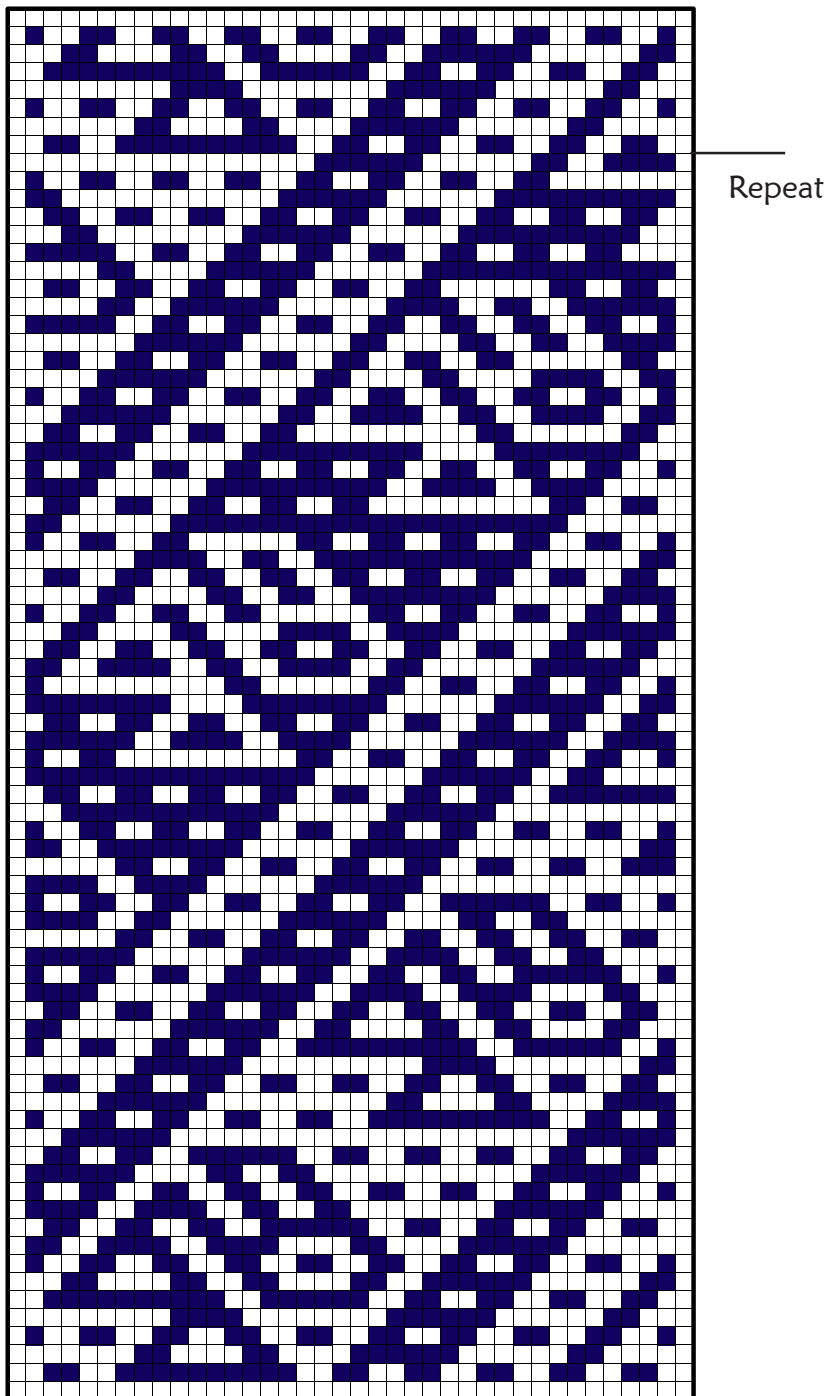
PEBBLE WEAVE ON A 4-SHAFT LOOM

WEAVING A BAND WITH A LIGHT AND DARK BACKGROUND



WARPING

For the borders wind 28 Coral and 8 Tan single warps.
 For the pattern area 36 Navy and 36 White warps are wound together,



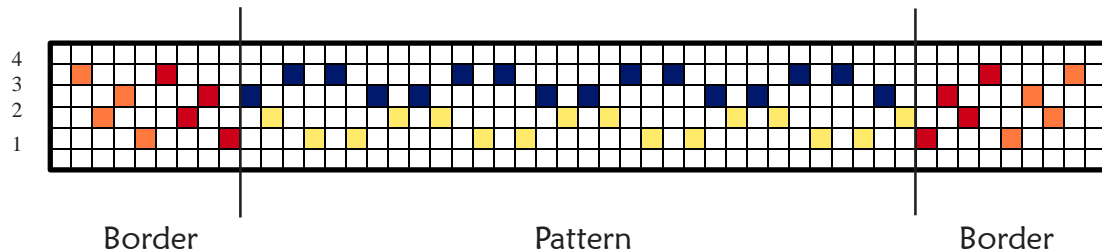
PEBBLE WEAVE ON A 4-SHAFT LOOM

WEAVING A BAND WITH A LIGHT AND DARK BACKGROUND



Adapted from a
pre-Columbian textile

PEBBLE WEAVE WITH SINGLE BORDERS



WEAVING A BAND WITH A DARK BACKGROUND AND A LIGHT PATTERN

WARPING

For the borders wind 4 Navy, 16 Coral and 4 Dark Coral single warps in multiples of 4 as the diagram above. For the pattern area wind 24 White and 24 Navy warps together. There must be the same number of double warps as the number of squares on the chart. Warp with a cross and tie to the back roller beam. The reed is not used.

TO WORK PLAIN PEBBLE WEAVE.

PEBBLE SHED 1 - (Light warp at the right edge) Open Shafts 1,2. Hold the border warps on a stick. Close Shafts 1,2 then open Shafts 2,4. Hold the pattern warps on a second stick. Push both sticks back toward the heddles, lift the sticks and pass the weft from LEFT to RIGHT through the new shed.

PATTERN SHED - Shafts 3,4 -- Weft from RIGHT to LEFT.

PEBBLE SHED 2 - (Dark warp at the right edge) Open Shafts 1,2. Hold the border warps on a stick. Close Shafts 1,2 then open Shafts 1,3. Hold the pattern warps on a second stick. Push both sticks back toward the heddles, lift the sticks and pass the weft from LEFT to RIGHT.

Alternate the Pattern Shed with Pebble Shed 1 and Pebble Shed 2.

WEAVING A PATTERN

Work as for Pebble Weave on a 4-shaft loom. (Weaving a band with a dark background)

PICKING UP THE PATTERN

PEBBLE SHED 1 - Open Shafts 1,2. Hold the border warps on a stick. Close Shafts 1,2. Open Shafts 2,4 and place your hand in the shed and hold the pattern warps. While holding these warps raise Shaft 3 for a DARK pick-up or Shaft 1 for a LIGHT pick-up. Close Shafts 2,4 and while holding the pattern warps pick-up the pattern according to the chart remembering to drop the complementary partner. Weft from LEFT to RIGHT through the new shed including the border warps.

PATTERN SHED - Open Shafts 3,4. Hold the warps then open Shafts 1,2. Close Shafts 3,4. Pick up the pattern according to the chart. Weft from RIGHT to LEFT through the new shed.

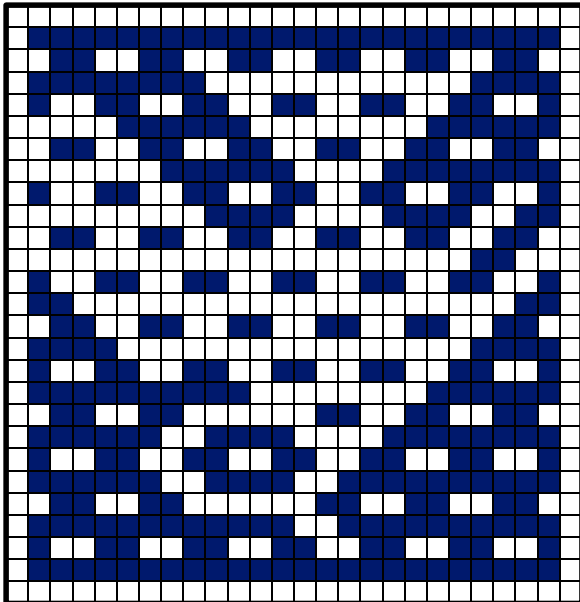
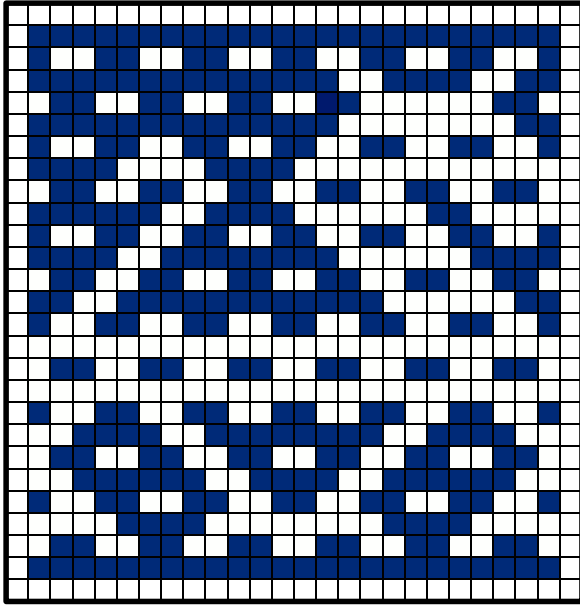
PEBBLE SHED 2 - Open Shafts 1,2. Hold the border warps on a stick. Close Shafts 1,2 then open Shafts 1,3. Hold the pattern warps and raise Shaft 4 for DARK pick-up or Shaft 2 for a LIGHT pick-up.

Close Shafts 1,3 and pick up the pattern. Weft from LEFT to RIGHT through new shed. Alternate the Pattern Shed with Pebble Shed 1 and Pebble Shed 2.

Because the tension of the single border is greater than the pattern area these threads may need further tensioning by hanging a weight on the pattern threads behind the heddles.

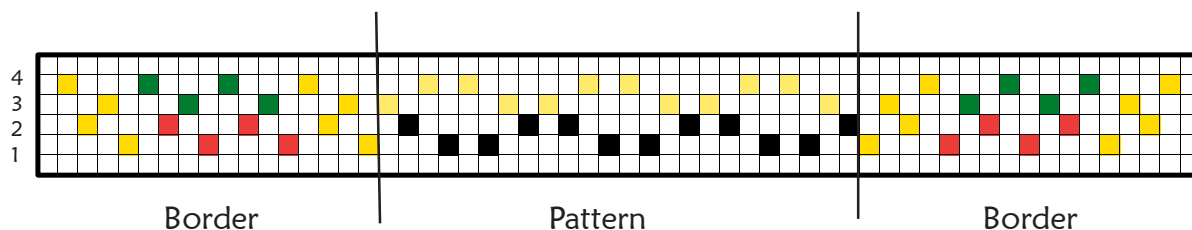
PEBBLE WEAVE WITH SINGLE BORDERS

WEAVING A BAND WITH A DARK BACKGROUND AND A LIGHT PATTERN



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PEBBLE WEAVE WITH SINGLE BORDERS



WEAVING A BAND WITH A LIGHT BACKGROUND

WARPING

For the borders wind 4 White, 8 Green and 8 Pink wound together, 4 White single warps. For the pattern area wind 16 White and 16 Black warps together. There must be the same number of double warps as the number of squares on the chart. Warp with a cross and tie to the back roller beam. The reed is not used.

TO WORK PLAIN PEBBLE WEAVE.

PEBBLE SHED 1 - (Dark warp at the right edge) Open Shafts 1,2. Hold the border warps on a stick. Close Shafts 1,2 then open Shafts 2,4. Hold the pattern warps on a second stick. Push both sticks back toward the heddles, lift the sticks and pass the weft from LEFT to RIGHT through the new shed.

PATTERN SHED - Shafts 3,4 -- Weft from RIGHT to LEFT.

PEBBLE SHED 2 - (Light warp at the right edge) Open Shafts 1,2. Hold the border warps on a stick. Close Shafts 1,2 then open Shafts 1,3. Hold the pattern warps on a second stick. Push both sticks back toward the heddles, lift the sticks and pass the weft from LEFT to RIGHT.

Alternate the Pattern Shed with Pebble Shed 1 and Pebble Shed 2.

WEAVING A PATTERN

Work as for Pebble Weave on a 4-shaft loom. The Dark warps are to the RIGHT of the Light warps.

PICKING UP THE PATTERN

PEBBLE SHED 1 - Open Shafts 1,2. Hold the border warps on a stick. Close Shafts 1,2. Open Shafts 2,4 and place your hand in the shed and hold the pattern warps. While holding these warps raise Shaft 1 for a DARK pick-up or Shaft 3 for a LIGHT pick-up. Close Shafts 2,4 and while holding the pattern warps pick-up the pattern according to the chart remembering to drop the complementary partner.

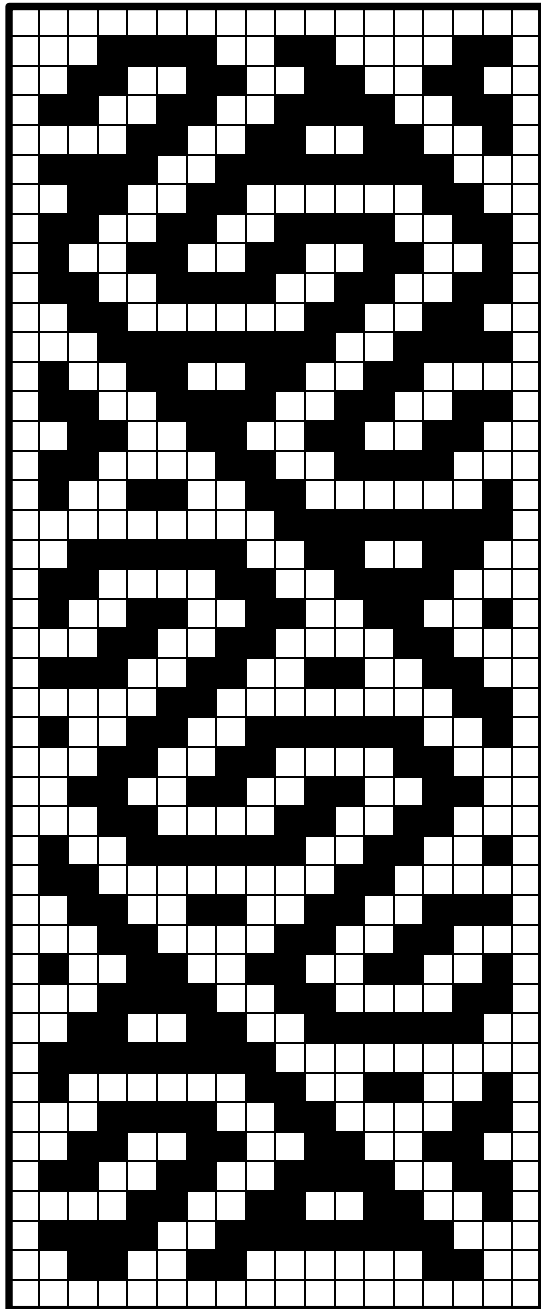
Weft from LEFT to RIGHT through the new shed including the border warps.

PATTERN SHED - Open Shafts 3,4. Hold the warps then open Shafts 1,2. Close Shafts 3,4. Pick up the pattern according to the chart. Weft from RIGHT to LEFT through the new shed.

PEBBLE SHED 2 - Open Shafts 1,2. Hold the border warps on a stick. Close Shafts 1,2 then open Shafts 1,3. Hold the pattern warps and raise Shaft 2 for DARK pick-up or Shaft 4 for a LIGHT pick-up.

Close Shafts 1,3 and pick up the pattern. Weft from LEFT to RIGHT through new shed. Alternate the Pattern Shed with Pebble Shed 1 and Pebble Shed 2.

PEBBLE WEAVE WITH SINGLE BORDERS



Repeat

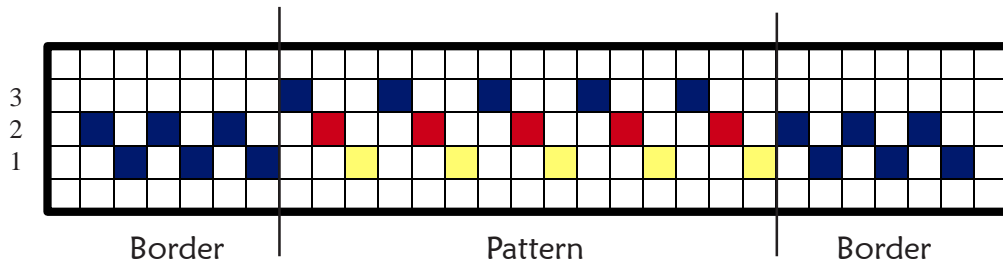
Begin with
Pebble Shed 2



16

Adapted from a pattern by Marijke van Epen
(The Unknown Tablet Weaving 2002)

3-COLOUR SINGLE FACED PEBBLE WEAVE



WARPING

For the borders wind 16 Navy single warps.

For the pattern area 32 Navy, 32 White and 32 Red warps are wound together.

WEAVING A PATTERN

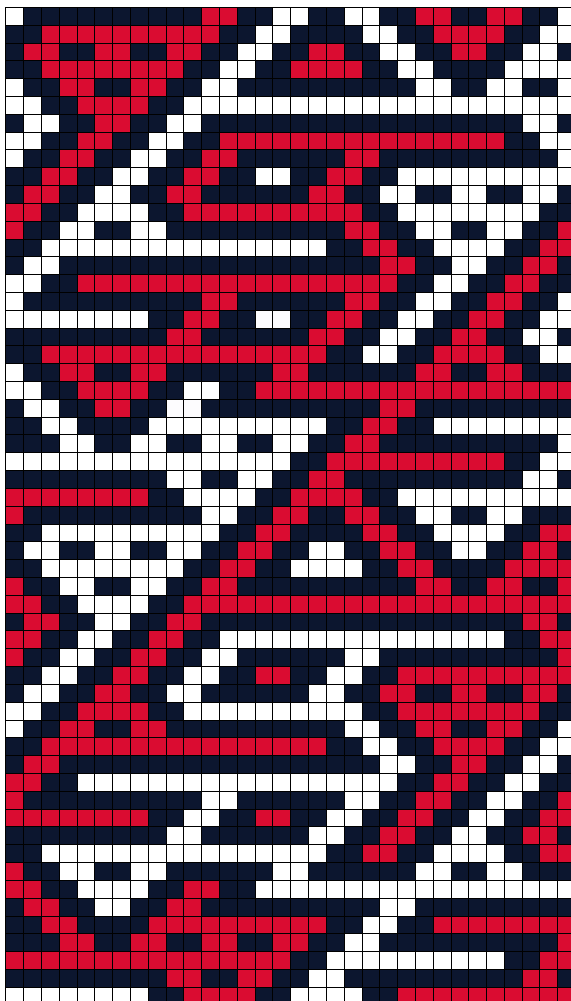
Shaft 1 and Shaft 2 alternate for the borders and are held on a stick. The pattern is picked up on every row.

1ST PATTERN ROW Open Shaft 1 and hold the border warps on a stick

Open Shafts 1,2,3 one at a time and select the warps on a separate stick for each colour according to the chart. Take care not to twist the warps when picking up.

Push the 4 sticks back toward the heddles. Close the shafts, raise the sticks and pass the weft through the new shed.

2ND PATTERN ROW Open Shaft 2, hold the border warps on a stick. Pick up the warps from Shafts 1,2,3 as for the 1st pattern row.



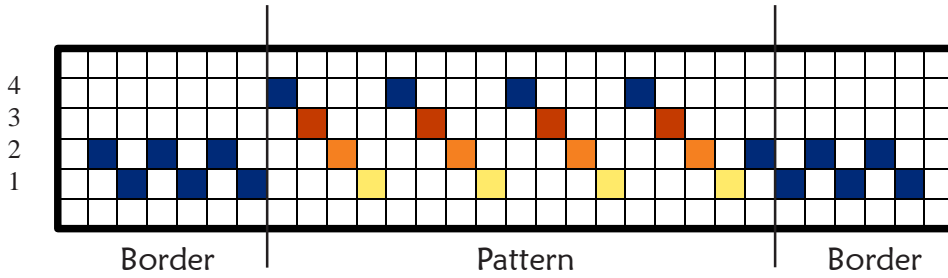
32



Adapted from a pattern by Marijke van Epen (The Unknown Tablet Weaving)

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4-COLOUR SINGLE FACED PEBBLE WEAVE



WARPING

For the borders wind 12 Navy single warps.

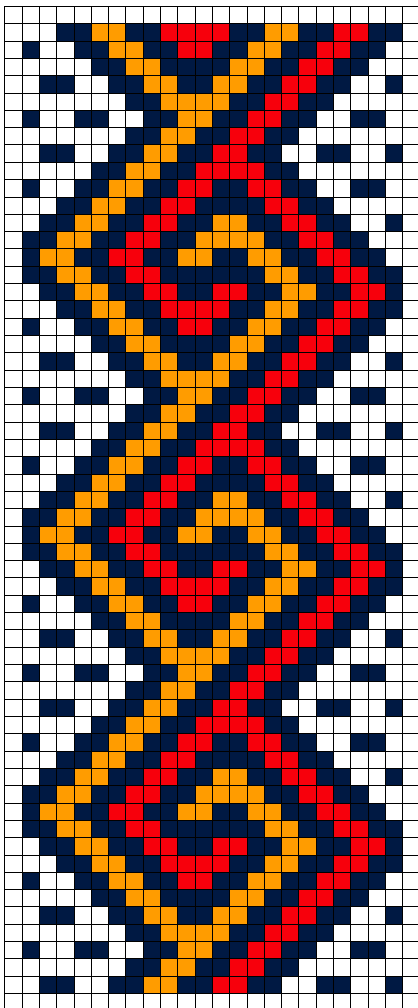
For the pattern 22 Navy, 22 White, 22 Coral and 22 Gold warps are wound together.

WEAVING A PATTERN

Shaft 1 and Shaft 2 alternate for the borders and are held on a stick. The pattern is picked up on every row.

1ST PATTERN ROW Open Shaft 1 and hold the border warps on a stick
Open Shafts 1,2,3 and 4 one at a time and select the warps on a separate stick for each colour according to the chart. Take care not to twist the warps when picking up.
Push the 5 sticks back toward the heddles. Close the shafts, raise the sticks and pass the weft through the new shed.

2ND PATTERN ROW Open Shaft 2, hold the border warps on a stick. Pick up the warps from Shafts 1,2,3 and 4 as for the 1st pattern row.



22



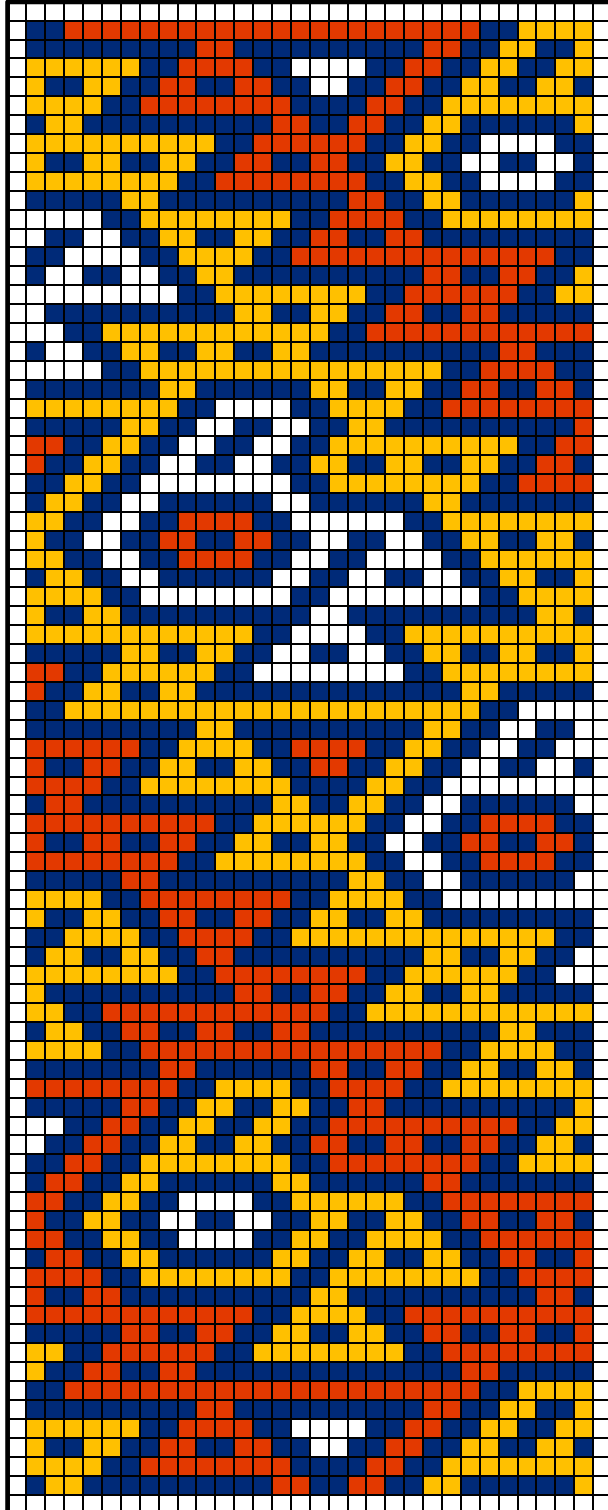
4-COLOUR SINGLE FACED PEBBLE WEAVE

WARPING

For the borders wind 4 Coral and 8 Navy single warps.

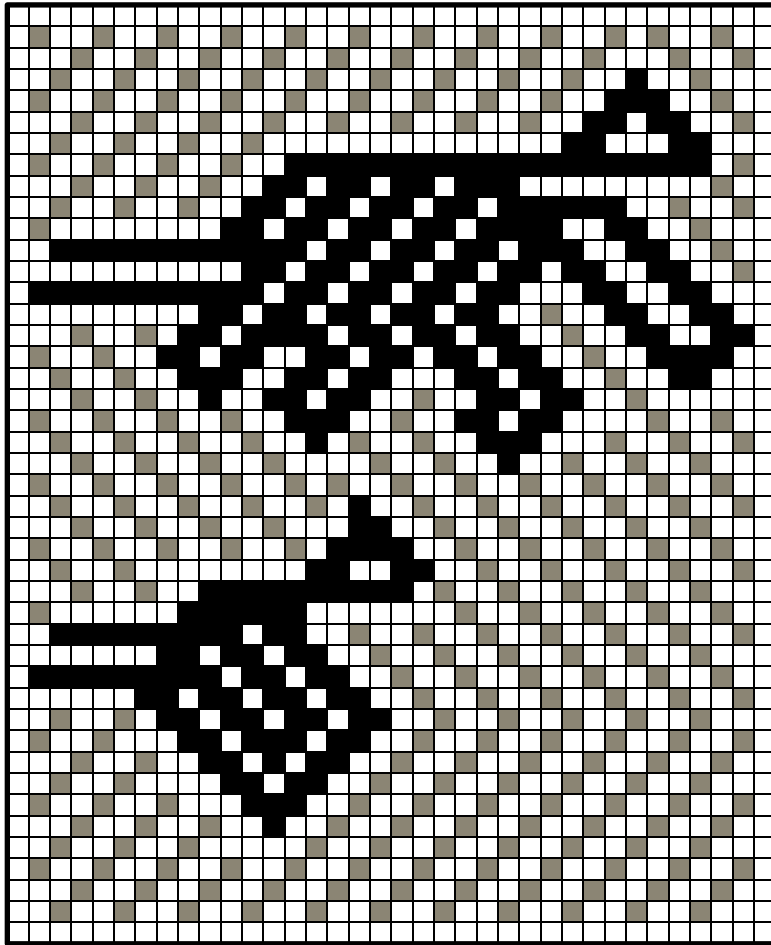
For the pattern 30 Navy, 30 White, 30 Coral and 30 Gold warps are wound together.

This pattern has long floats on the back and is best sewn to a fabric as a decoration.



Pattern adapted from Double -Woven
Treasures from Old Peru 1985
(Adele Cahlander and Suzanne Baizerman)

COMPLEMENTARY WARP TWILL ON A 4-SHAFT LOOM



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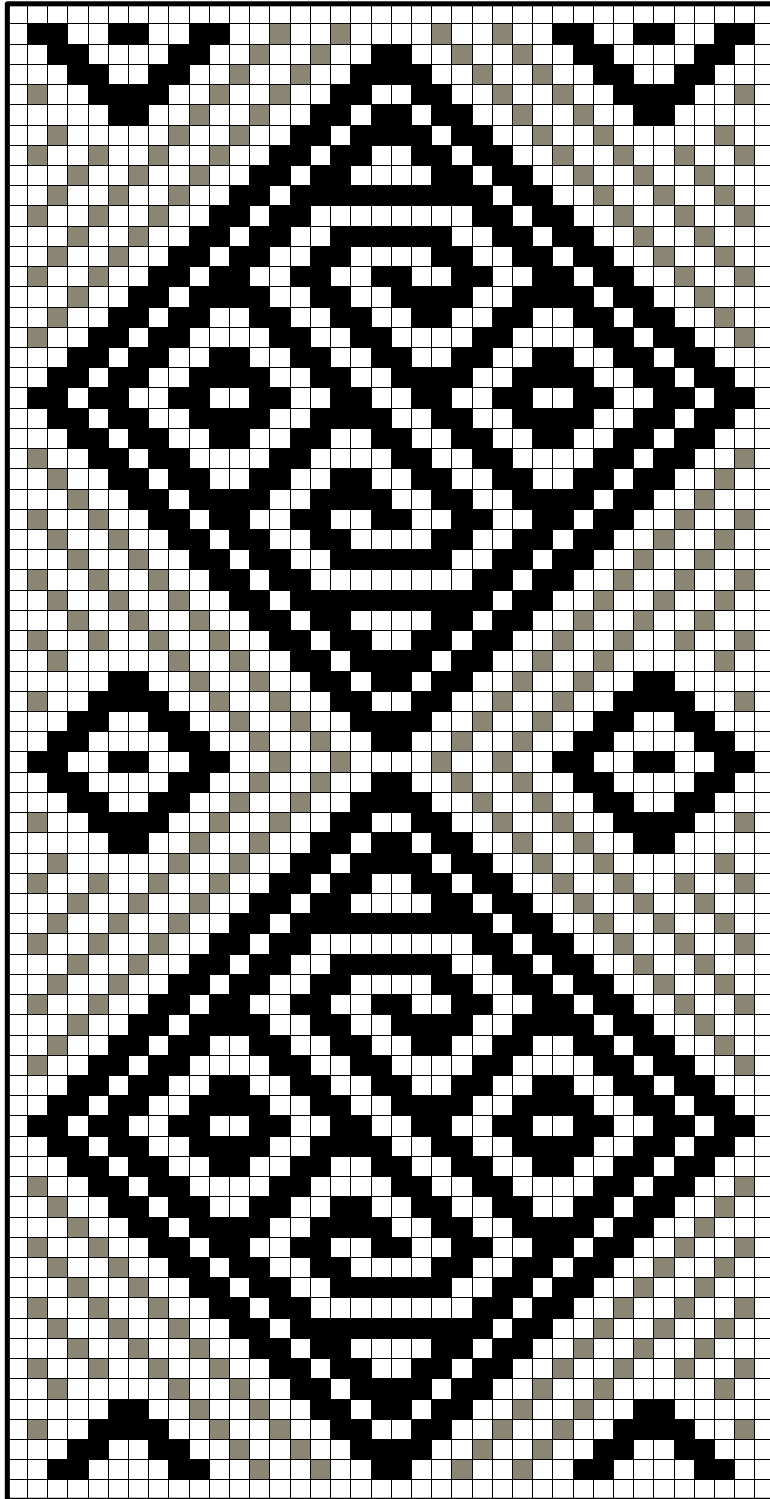


COMPLEMENTARY WARP TWILL ON A 4-SHAFT LOOM

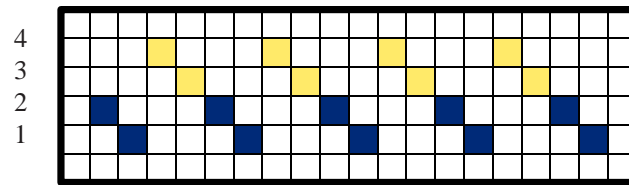
WARPING

For the borders wind 8 Blue, and 8 Red single warps

For the pattern area 36 Black and 36 white are wound together.



BALANCED DOUBLE WEAVE ON A 4-SHAFT LOOM



Dark background
Light pattern

WARPING

For a Dark Background Wind 2 Dark then 2 Light threads (Pearl Cotton 10/2) for the number of warp threads required for the pattern, ending with 2 dark threads.

To estimate the number of warps required for each pattern you must count the lines on the graph and warp 2 Dark warps for each line and 2 Light warps for each space between. In this pattern there are 16 lines and 15 spaces (32 Dark and 30 light warps). Thread the heddles as the diagram and sley 4 warps in each dent of a 10 dent reed. The last pair of dark warps are threaded by themselves in the next dent.

UNDERSTANDING THE PATTERN DIAGRAM

The diagrams are drawn as explained in *Double-Woven Treasures of Old Peru* (1985) by Adele Cahlander and Suzanne Baizerman

The VERTICAL lines on the graph are DARK warp PAIRS and the SPACES between are LIGHT warp PAIRS of the lower layer.

The HORIZONTAL lines on the graph are 2 passes of DARK weft and the HORIZONTAL spaces between are for 2 passes of LIGHT warp in the lower layer.

The wefts are linked at each side of the braid.

The instructions are read as follows. $\frac{2 \quad 8 \quad 2}{2 \quad 2}$ Pick up
Drop down

TO WEAVE A PLAIN DARK BACKGROUND

2 shuttles are used, a Dark shuttle weaves from the LEFT, a Light shuttle from the RIGHT.

Odd numbered rows (1,3,5 ---) are Dark LINE rows.

Even numbered rows (2,4,6---) are Light SPACE rows.

LINE (ODD numbered row) - SHAFT 1, Pass the dark weft from LEFT TO RIGHT. Interlock with light weft at right.

SHAFT 2, Dark weft RIGHT TO LEFT.

SPACE (EVEN numbered rows) - SHAFTS 1,2,3 Light weft from RIGHT TO LEFT. Interlock with dark weft at left.

SHAFTS 1,2,4 Light weft left LEFT TO RIGHT.

End with a LINE row. Next row is a SPACE row ready to begin pattern pick-up.

BALANCED DOUBLE WEAVE ON A 4-SHAFT LOOM

TO BEGIN PATTERN PICK-UP

The pick-up is always PAIRS of warps. Pick-up starts with a space row.

SPACE - (EVEN) - (LIGHT weft).

Shafts 1, 2 - Pick-up DARK pairs according to the diagram. Insert a stick. Close Shafts 1,2.

Shaft 3. Push the stick back toward the heddles, the lower layer drops down.

Pass LIGHT weft RIGHT TO LEFT through the lower shed below. Interlink the Light and Dark wefts. Leave the stick under the picked up warps.

Shaft 4. The stick is under the picked up warps. The lower layer drops down.

Pass the LIGHT weft LEFT TO RIGHT through the lower shed. Interlink the Light and Dark wefts. Remove the stick and beat.

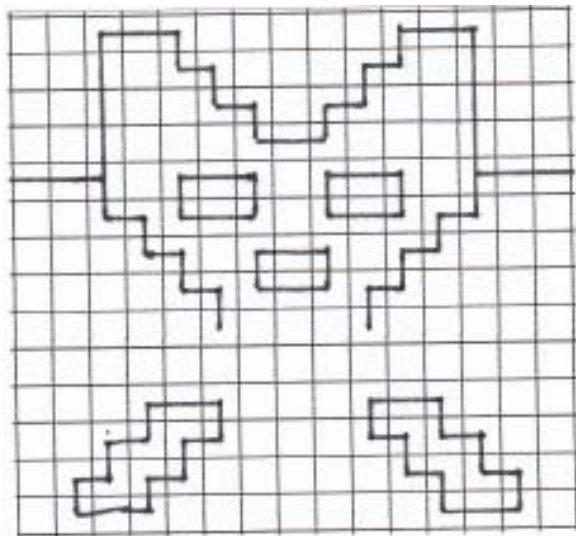
LINE - (ODD) - (DARK weft).

Shafts 3,4 - Pick-up LIGHT pairs as diagram. Insert a stick. Close shafts 3,4.

Shaft 1. Push the stick back toward the heddles, the lower layer drops down.

Pass DARK weft LEFT TO RIGHT through the lower shed. Interlink the Dark and Light wefts. Leave the stick under the picked up warps.

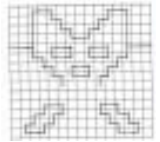
Shaft 2. The stick is under the picked up warps. The lower layer drops down. Pass the DARK weft RIGHT TO LEFT through the lower shed. Interlink the Dark and Light wefts. Remove the stick and beat.



BALANCED DOUBLE WEAVE ON A 4-SHAFT LOOM

Row 1 - Shaft 1 then Shaft 2 \longleftrightarrow _____

Pick up
Drop down



LINE - Dark weft (each row represents 2 passes of the wefts)

Row 2 - Dark pick-up - Light weft

SPACE \longleftrightarrow

$\frac{2 \quad 8 \quad 2}{2 \quad 2}$

Row 3 - Light pick-up - Dark weft

$\frac{1 \quad 1 \quad 1 \quad 1}{1 \quad 1 \quad 7 \quad 1 \quad 1}$

Row 4 - Dark pick-up - Light weft

$\frac{2 \quad 1 \quad 6 \quad 1 \quad 2}{1 \quad 1 \quad 1 \quad 1}$

Row 5 - Light pick-up - Dark weft

$\frac{1 \quad 1 \quad 1 \quad 1}{2 \quad 1 \quad 5 \quad 1 \quad 2}$

Row 6 - Dark pick-up - Light weft

$\frac{3 \quad 1 \quad 4 \quad 1 \quad 3}{1 \quad 1 \quad 1 \quad 1}$

Row 7 - Light pick-up - Dark weft

$\frac{1 \quad 1 \quad 1 \quad 1}{3 \quad 1 \quad 3 \quad 1 \quad 3}$

Row 8 - Dark pick-up - Light weft

$\frac{4 \quad 4 \quad 4}{2 \quad 2}$

Row 9 - Shaft 1 then Shaft 2 - Dark weft _____

Row 10 - Shafts 123 then Shafts 124 - Light weft _____

Row 11 - Shaft 1 then Shaft 2 - Dark weft _____

Row 12 - Shafts 123 then Shafts 124 - Light weft _____

Row 13 - Light pick-up - Dark weft

$\frac{1 \quad 1}{5 \quad 3 \quad 5}$

Row 14 - Dark pick-up - Light weft

$\frac{5 \quad 1 \quad 1 \quad 5}{1 \quad 2 \quad 1}$

Row 15 - Light pick-up - Dark weft

$\frac{1 \quad 1 \quad 1 \quad 1}{4 \quad 1 \quad 1 \quad 1 \quad 4}$

BALANCED DOUBLE WEAVE ON A 4-SHAFT LOOM

SPACE Pick up Dark pairs - Light weft, 2 passes

LINE Pick up Light pairs - Dark weft, 2 passes

SPACE

Row 16 - Dark pick-up - Light weft $\frac{4 \quad 2 \quad 2 \quad 4}{1 \quad 2 \quad 1}$

LINE

Row 17 - Light pick-up - Dark weft $\frac{1 \quad 1}{3 \quad 7 \quad 3}$

Row 18 - Dark pick-up - Light weft $\frac{3 \quad 1 \quad 2 \quad 1 \quad 3}{1 \quad 2 \quad 2 \quad 1}$

Row 19 - Light pick-up - Dark weft $\frac{1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1}{2 \quad 1 \quad 1 \quad 1 \quad 1 \quad 2}$

Row 20 - Dark pick-up - Light weft $\frac{2 \quad 2 \quad 2}{3 \quad 2 \quad 2 \quad 3}$

Row 21 - Light pick-up - Dark weft $\frac{2 \quad 2}{11}$

Row 22 - Dark pick-up - Light weft $\frac{4 \quad 4}{3 \quad 2 \quad 3}$

Row 23 - Light pick-up - Dark weft $\frac{2 \quad 3 \quad 2}{4 \quad 4}$

Row 24 - Dark pick-up - Light weft $\frac{3 \quad 3}{3 \quad 4 \quad 3}$

Row 25 - Light-pick-up - Dark weft $\frac{2 \quad 5 \quad 2}{3 \quad 3}$

Row 26 - Dark pick-up - Light weft $\frac{2 \quad 2}{3 \quad 6 \quad 3}$

Row 27 - Light pick-up - Dark weft $\frac{2 \quad 7 \quad 2}{2 \quad 2}$

Row 28 - Dark pick-up - Light weft $\frac{2 \quad 2}{3 \quad 6 \quad 3}$

Row 29 - Shafts 134 then Shafts 234 - Dark weft _____

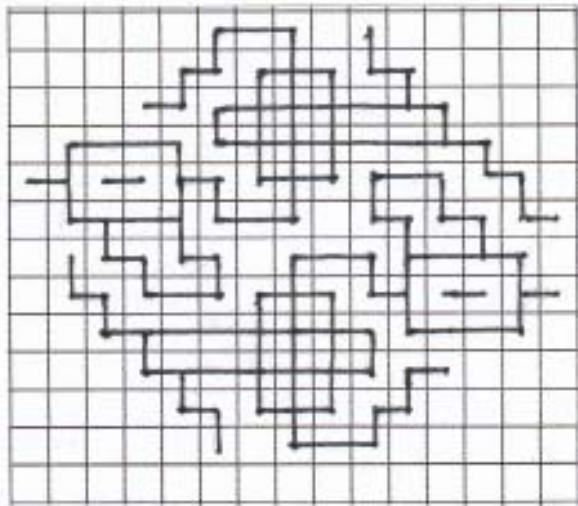
Row 30 - Shaft 3 then Shaft 4 - Light weft _____

BALANCED DOUBLE WEAVE ON A 4-SHAFT LOOM

WARPING

For a Dark Background Wind 2 Dark then 2 Light threads (Pearl Cotton 10/2) for the number of warp threads required for the pattern, ending with 2 dark threads.

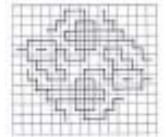
To estimate the number of warps required for each pattern you must count the lines on the graph and warp 2 Dark warps for each line and 2 Light warps for each space between. In this pattern there are 16 lines and 15 spaces (32 Dark and 30 light warps). Thread the heddles as the diagram and sley 4 warps in each dent of a 10 dent reed. The last pair of dark warps are threaded by themselves in the next dent.



BALANCED DOUBLE WEAVE ON A 4-SHAFT LOOM

Row 1 - Shaft 1 then Shaft 2 \longleftrightarrow _____

Pick up
Drop down



LINE - Dark weft (each row represents 2 passes of the wefts)

Row 2 - Dark pick-up - Light weft

SPACE \longleftrightarrow

$\frac{5 \quad 2 \quad 6}{1 \quad 2}$

Row 3 - Light pick-up - Dark weft

$\frac{1 \quad 1 \quad 1}{5 \quad 1 \quad 1 \quad 5}$

Row 4 - Dark pick-up - Light weft

$\frac{5 \quad 1 \quad 1 \quad 5}{1 \quad 2 \quad 1}$

Row 5 - Light pick-up - Dark weft

$\frac{1 \quad 3 \quad 1}{4 \quad 1 \quad 1 \quad 4}$

Row 6 - Dark pick-up - Light weft

$\frac{4 \quad 1 \quad 4}{6 \quad 1}$

Row 7 - Light pick-up - Dark weft

$\frac{1 \quad 4}{3 \quad 2 \quad 5}$

Row 8 - Dark pick-up - Light weft

$\frac{3 \quad 1 \quad 2}{7 \quad 3}$

Row 9 - Light pick-up - Dark weft

$\frac{1 \quad 3 \quad 1 \quad 1}{2 \quad 3 \quad 1 \quad 2 \quad 1}$

Row 10 - Dark pick-up - Light weft

$\frac{2 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1}{1 \quad 2 \quad 2 \quad 1 \quad 1 \quad 1}$

Row 11 - Light pick-up - Dark weft

$\frac{1 \quad 1 \quad 1 \quad 1 \quad 2 \quad 1}{1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 2 \quad 1}$

Row 12 - Dark pick-up - Light weft

$\frac{1 \quad 1 \quad 1 \quad 2 \quad 1 \quad 2}{1 \quad 1 \quad 1 \quad 2 \quad 3}$

Row 13 - Light pick-up - Dark weft

$\frac{1 \quad 1 \quad 1 \quad 1}{2 \quad 1 \quad 5 \quad 1 \quad 2}$

Row 14 - Dark pick-up - Light weft

$\frac{2 \quad 1 \quad 2 \quad 1 \quad 3}{3 \quad 2 \quad 1 \quad 1}$

Row 15 - Light pick-up - Dark weft

$\frac{1 \quad 2 \quad 1 \quad 1 \quad 1 \quad 1}{1 \quad 2 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1}$

BALANCED DOUBLE WEAVE ON A 4-SHAFT LOOM

SPACE Pick up Dark pairs - Light weft, 2 passes

LINE Pick up Light pairs - Dark weft, 2 passes

SPACE

Row 16 - Dark pick-up - Light weft $\frac{1 \ 1 \ 1 \ 1 \ 1 \ 1 \ 2}{1 \ 1 \ 1 \ 2 \ 2 \ 1}$

LINE

Row 17 - Light pick-up - Dark weft $\frac{1 \ 1 \ 3 \ 1}{1 \ 2 \ 1 \ 3 \ 2}$

Row 18 - Dark pick-up - Light weft $\frac{2 \ 1 \ 3}{3 \ 7}$

Row 19 - Light pick-up - Dark weft $\frac{4 \ 1}{5 \ 2 \ 3}$

Row 20 - Dark pick-up - Light weft $\frac{4 \ 1 \ 4}{1 \ 6}$

Row 21 - Light pick-up - Dark weft $\frac{1 \ 3 \ 1}{4 \ 1 \ 1 \ 4}$

Row 22 - Dark pick-up - Light weft $\frac{5 \ 1 \ 1 \ 5}{1 \ 2 \ 1}$

Row 23 - Light pick-up - Dark weft $\frac{1 \ 1 \ 1}{5 \ 1 \ 1 \ 5}$

Row 24 - Dark pick-up - Light weft $\frac{6 \ 2 \ 5}{2 \ 1}$

Row 25 - Shaft 1 then Shaft 2 - Dark weft _____

Row 26 - Shafts 123 then Shafts 124 - Light weft _____