

Calculating Warps, Wefts and Setts

(For more in-depth information, see *The Weaver's Companion*)

Length of Yarn on Cone:

- Length of yarn from McMorran balance x 100 = _____ yards/lb.
- Yds/lb x weight of yarn on cone = _____ yards on hand.

Shrinkage and Take-Up

- Measured length or width before finishing minus length after wet finishing = shrinkage.
- Expressed as percentage: $\frac{\text{shrinkage}}{\text{original length}} \times 100$

Warp Length:

- Total Woven Length = finished length per item plus hems or fringe multiplied by the number of items to be woven
- Estimated Shrinkage and Take-up = 20 - 30% of Total Woven Length
- Estimate Loom Waste = generally 24" for a small loom; 36" for a large loom
- Warp Length = a + b + c

Warp Width:

- Determine Desired Finished Width
- Estimated Shrinkage and Take-up = 20 - 30% of Desired Finished Width
- Warp width = a + b

Sett (also known as **ends per inch, epi**):

- Use tables. or
- Wrap yarn closely around a ruler for 1 inch and count wraps. Sett for plain weave is about $\frac{1}{2}$ of number of wraps.

Total yardage for warp:

- Total warp width X sett = Total # of ends.
- Total # of ends X Total warp length = Total yardage for warp.

Total yardage for weft:

- Determine Total Warp Width, Total Woven Warp Length, and Picks per Inch (PPI)
- Length required to weave one inch = Total Width X PPI.
- Total Weft in Yards = Length required to weave one inch X total number of woven inches divided by 36 inches per yard