```
            Planning your Spiral Broken Star Quilt


Spiral Broken Star with Rocket blocks and Braid border

\(6 \times 6\) Broken Star with divisions for size calculation

Website: www.JanKrentz.com

\title{
Planning your Spiral Broken Star Quilt \\ Design Aspects \\ Jan Krentz multi-day workshop Calculations and Dimensions \\ 2015 Empty Spools Seminar-Session II - Feb. 27-March 4, 2015
}

The following dimensions are for the CENTER MEDALLION only, without additional borders. The Queen and King designations indicate the best selection if the medallion fits the surface of the bed. Additional borders will increase the quilt's overall dimensions, and options include wide, medium or narrow borders (according to mattress depth and bed frame), adding pieced or appliquéd motifs to the borders, including a pillow tuck area at the top, rounding or angling the lower two corners for ease of movement around the quilt when in use on the bed. Additional accessories can be made such as a matching dust ruffle, pillow shams, or decorative trim applied to commercially-purchased sheets \& pillowcases.

Note the degree of construction complexity / number of matching intersections increases significantly from the \(4 \times 4\) to the \(5 \times 5\) and \(6 x 6\) layouts. Use the dimensions below to determine which size quilt you plan to make, and the strip widths required to cut for each quilt option.

\section*{Considerations when designing your quilt:}
- Overall desired size?
- Wall quilt, lap size or bed quilt? Refer to the Standard mattress size chart (next).
- Square or rectangular?
- Customized depth of borders to accommodate a deeper mattress or taller bed frame?
- Location of the Spiral medallion star design?
- The medallion fills both the surface of the bed and flows off the sides. Minimal small framing border is added, which appears at the quilt's outer edges.
- Centered on the bed surface - requires the addition / design of sides and drop borders.
- Centered on the bed surface, plus additional pillow-tuck and design elements which will lay over the pillows when the bed is made.
- Centered on the bed surface - elaborate side and bottom drop wide borders are planned; applique or pieced designs are added to the 3 wide borders.
- Additional design elements such as pillow shams, matching or coordinating dust ruffle, curtain valance, throw pillows, etc.?
- Extra yardage should be purchased depending upon the size of the accessory items.
- Scraps can be utilized, pieced together for binding, or creating a decorative border to add to the hem of commercial sheets, pillowcases, or curtains.

Next page: STANDARD MATTRESS DIMENSIONS:

\section*{STANDARD MATTRESS DIMENSIONS:}


\section*{Design Complexity}

When sewing your star medallion quilt, consider the number of intersections you must match when sewing the diamond units. The skill level to match increasing numbers of seam intersections increases the complexity and assembly time.

\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|l|}{Spiral Broken Star - \(6 \times 6\) layout - Medallion without borders - MASTER SKILL LEVEL} \\
\hline Cut strip sizes & \(A \& B\) unit measurements & Center medallion measurements & Number of matching intersections per diamond unit \\
\hline \begin{tabular}{l}
Cut Strip width1.25" \\
Finished - \(3 / 4^{\prime \prime}\)
\end{tabular} & \[
\begin{aligned}
& A=6 \times .75^{\prime \prime}=4.5^{\prime \prime} \\
& B=4.5^{\prime \prime} \times 1.414= \\
& 6.363^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& 4 \mathrm{~A}=18^{\prime \prime} \\
& 4 \mathrm{~B}=25.452^{\prime \prime} \\
& 18+25.452= \\
& \quad 43.452^{\prime \prime}
\end{aligned}
\] & 25 intersections per diamond unit \(\times 32\) diamond units in the quilt \(25 \times 32=\) 800 intersections \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|}
\hline \multirow[b]{2}{*}{Queen} & \multicolumn{5}{|l|}{Spiral Broken Star - \(6 \times 6\) layout - Medallion without borders - MASTER SKILL LEVEL} \\
\hline & \begin{tabular}{l}
Cut Strip width1.5" \\
Finished - 1"
\end{tabular} & \[
\begin{aligned}
& A=6 \times 1^{\prime \prime}=6^{\prime \prime} \\
& B=6^{\prime \prime} \times 1.414=8.484^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& 4 \mathrm{~A}=24^{\prime \prime} \\
& 4 \mathrm{~B}=33.936^{\prime \prime} \\
& 24+33.936=
\end{aligned}
\] &  & \multirow{5}{*}{\begin{tabular}{l}
25 intersections per diamond unit \\
x 32 diamond units in the quilt
\[
25 \times 32=
\] \\
800 intersections
\end{tabular}} \\
\hline \multirow[t]{4}{*}{King} & \begin{tabular}{l}
Cut Strip w-1.75" \\
Finished - 1.25"
\end{tabular} & \[
\begin{aligned}
& \hline A=6 \times 1.25^{\prime \prime}=7.5^{\prime \prime} \\
& B=7.5^{\prime \prime} \times 1.414= \\
& 10.605^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& \hline 4 \mathrm{~A}=30^{\prime \prime} \\
& 4 \mathrm{~B}=42.42^{\prime \prime} \\
& 30+42.42=
\end{aligned}
\] & 72.42" & \\
\hline & \begin{tabular}{l}
Cut Strip width-2" \\
Finished - 1.5"
\end{tabular} & \[
\begin{aligned}
& A=6 \times 1.5^{\prime \prime}=9^{\prime \prime} \\
& B=9^{\prime \prime} \times 1.414= \\
& 12.726^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& \hline 4 \mathrm{~A}=36^{\prime \prime} \\
& 4 \mathrm{~B}=50.904^{\prime \prime} \\
& 36+50.904=
\end{aligned}
\] & 86.904" & \\
\hline & \[
\begin{aligned}
& \hline \text { Cut Strip width- } \\
& 2.25^{\prime \prime} \\
& \text { Finished }-1.75^{\prime \prime} \\
& \hline
\end{aligned}
\] & \[
\begin{gathered}
A=6 \times 1.75^{\prime \prime}=10.5^{\prime \prime} \\
B=10.5^{\prime \prime} \times 1.414= \\
14.847^{\prime \prime} \\
\hline
\end{gathered}
\] & \[
\begin{aligned}
& 4 \mathrm{~A}=42^{\prime \prime} \\
& 4 \mathrm{~B}=59.388^{\prime \prime} \\
& 42+59.388=
\end{aligned}
\] & \[
101.388^{\prime \prime}
\] & \\
\hline & \begin{tabular}{l}
Cut Strip width 2.5 " \\
Finished size - 2"
\end{tabular} & \begin{tabular}{l}
\[
\begin{aligned}
& \mathrm{A}=6 \times 2^{\prime \prime}=12^{\prime \prime} \\
& \mathrm{B}=12 \times 1.414=
\end{aligned}
\] \\
16.968"
\end{tabular} & \[
\begin{array}{|l|}
\hline 4 \mathrm{~A}=48^{\prime \prime} \\
4 \mathrm{~B}=67.87^{\prime \prime} \\
48+67.87=
\end{array}
\] & 115.87" & \\
\hline
\end{tabular}

Spiral Broken Star - \(5 \times 5\) layout - Medallion without borders - EXPERIENCED / MASTER SKILL LEVEL
\begin{tabular}{|c|c|c|c|}
\hline Cut strip sizes & A \& B unit measurements & Center medallion measurements & Number of matching intersections per diamond unit \\
\hline \[
\begin{aligned}
& \hline \text { Cut Strip width - } \\
& 1.25^{\prime \prime} \\
& \text { Finished }-3 / 4^{\prime \prime} \\
& \hline
\end{aligned}
\] & \[
\begin{aligned}
& A=5 \times .75^{\prime \prime}=3.75^{\prime \prime} \\
& B=3.75^{\prime \prime} \times 1.414=5.3025^{\prime \prime}
\end{aligned}
\] & \[
\begin{array}{|l|}
\hline 4 \mathrm{~A}=15^{\prime \prime} \\
4 \mathrm{~B}=21.21^{\prime \prime} \\
15+21.21=36.21^{\prime \prime} \\
\hline
\end{array}
\] & \multirow[b]{3}{*}{16 intersections per diamond unit} \\
\hline \begin{tabular}{l}
Cut Strip width \(1.5^{\prime \prime}\) \\
Finished - \(1^{\prime \prime}\)
\end{tabular} & \[
\begin{aligned}
& A=5 \times 1^{\prime \prime}=5^{\prime \prime} \\
& B=5^{\prime \prime} \times 1.414=7.07^{\prime \prime}
\end{aligned}
\] & \[
\begin{array}{|l|}
\hline 4 \mathrm{~A}=20^{\prime \prime} \\
4 \mathrm{~B}=28.28^{\prime \prime} \\
20+28.28=48.28^{\prime \prime} \\
\hline
\end{array}
\] & \\
\hline \begin{tabular}{l}
Cut Strip width1.75" \\
Finished - 1.25"
\end{tabular} & \[
\begin{aligned}
& A=5 \times 1.25^{\prime \prime}=6.25^{\prime \prime} \\
& B=6.25^{\prime \prime} \times 1.414=8.8375^{\prime \prime}
\end{aligned}
\] & \[
\begin{array}{|l|}
\hline 4 \mathrm{~A}=25^{\prime \prime} \\
4 \mathrm{~B}=35.35^{\prime \prime} \\
25+35.35=60.35^{\prime \prime}
\end{array}
\] & \\
\hline \begin{tabular}{l}
Cut Strip width-2" \\
Finished - 1.5"
\end{tabular} & \[
\begin{aligned}
& A=5 \times 1.5^{\prime \prime}=7.5^{\prime \prime} \\
& B=7.5^{\prime \prime} \times 1.414=10.605^{\prime \prime}
\end{aligned}
\] & \[
\begin{array}{|l|}
\hline 4 \mathrm{~A}=30^{\prime \prime} \\
4 \mathrm{~B}=42.42^{\prime \prime} \\
30+42.42=72.42^{\prime \prime} \\
\hline
\end{array}
\] & \(\times 32\) diamond units in the quilt \\
\hline \begin{tabular}{l}
Cut Strip width\(2.25^{\prime \prime}\) \\
Finished - 1.75"
\end{tabular} & \[
\begin{aligned}
& A=5 \times 1.75^{\prime \prime}=8.75^{\prime \prime} \\
& B=8.75^{\prime \prime} \times 1.414=12.3725^{\prime \prime}
\end{aligned}
\] & \[
\begin{array}{|l|}
\hline 4 \mathrm{~A}=35^{\prime \prime} \\
4 \mathrm{~B}=49.49^{\prime \prime} \\
35+49.49=84.49^{\prime \prime}
\end{array}
\] & \[
\begin{gathered}
16 \times 32= \\
512 \text { intersections }
\end{gathered}
\] \\
\hline \begin{tabular}{l}
Cut Strip width 2.5" \\
Finished size - 2"
\end{tabular} & \[
\begin{aligned}
& A=5 \times 2^{\prime \prime}=10^{\prime \prime} \\
& B=10 \times 1.414=14.14^{\prime \prime}
\end{aligned}
\] & \[
\begin{array}{|l|}
\hline 4 \mathrm{~A}=40^{\prime \prime} \\
4 \mathrm{~B}=56.56^{\prime \prime} \\
40+56.56=96.56^{\prime \prime} \\
\hline
\end{array}
\] & \\
\hline \begin{tabular}{l}
Strip w.- 2.75" \\
Finished size -
\[
2.25 "
\]
\end{tabular} & \[
\begin{aligned}
& A=5 \times 2.25^{\prime \prime}=11.25^{\prime \prime} \\
& B=11.25 \times 1.414=15.9075^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& 4 \mathrm{~A}=45^{\prime \prime} \\
& 4 \mathrm{~B}=63.63^{\prime \prime} \\
& 45+63.63=108.63^{\prime \prime}
\end{aligned}
\] & \\
\hline
\end{tabular}

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Design Aspects
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\begin{tabular}{|c|c|c|c|c|}
\hline \multirow[t]{3}{*}{} & \multicolumn{4}{|l|}{Spiral Broken Star - \(4 \times 4\) layout - Medallion without borders - EXPERIENCED SKILL LEVEL} \\
\hline & Cut strip sizes & \(A \& B\) unit measurements & Center medallion measurements & Number of matching intersections per diamond unit \\
\hline & \begin{tabular}{l}
Cut Strip width 1.25" \\
Finished - 3/4"
\end{tabular} & \[
\begin{aligned}
& A=4 \times .75^{\prime \prime}=3^{\prime \prime} \\
& B=3^{\prime \prime} \times 1.414=4.242^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& 4 \mathrm{~A}=12^{\prime \prime} \\
& 4 \mathrm{~B}=16.968^{\prime \prime} \\
& 12+16.968=28.968^{\prime \prime}
\end{aligned}
\] & \multirow{6}{*}{\begin{tabular}{l}
9 intersections per unit \(\times 32\) diamonds in the quilt
\[
9 \times 32=
\] \\
288 intersections
\end{tabular}} \\
\hline Twin & \begin{tabular}{l}
Cut Strip width \(1.5^{\prime \prime}\) \\
Finished - \(1^{\prime \prime}\)
\end{tabular} & \[
\begin{aligned}
& A=4 \times 1^{\prime \prime}=4^{\prime \prime} \\
& B=4^{\prime \prime} \times 1.414=5.656^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& 4 \mathrm{~A}=16^{\prime \prime} \\
& 4 \mathrm{~B}=22.624^{\prime \prime} \\
& 16+22.624=38.624^{\prime \prime}
\end{aligned}
\] & \\
\hline Full & \begin{tabular}{l}
Cut Strip width1.75" \\
Finished - 1.25"
\end{tabular} & \[
\begin{aligned}
& \mathrm{A}=4 \times 1.25^{\prime \prime}=5^{\prime \prime} \\
& \mathrm{B}=5^{\prime \prime} \times 1.414=7.07^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& \hline 4 \mathrm{~A}=20^{\prime \prime} \\
& 4 \mathrm{~B}=28.28^{\prime \prime} \\
& 20+28.28=48.28^{\prime \prime}= \\
& \hline
\end{aligned}
\] & \\
\hline Queen & Cut Strip width-2" Finished - 1.5" & \[
\begin{aligned}
& A=4 \times 1.5^{\prime \prime}=6^{\prime \prime} \\
& B=6^{\prime \prime} \times 1.414=8.484^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& \hline 4 \mathrm{~A}=24^{\prime \prime} \\
& 4 \mathrm{~B}=33.936^{\prime \prime} \\
& 24+33.936=57.936^{\prime \prime}
\end{aligned}
\] & \\
\hline King & \begin{tabular}{l}
Cut Strip width2.25" \\
Finished - 1.75"
\end{tabular} & \[
\begin{aligned}
& A=4 \times 1.75^{\prime \prime}=7^{\prime \prime} \\
& B=7^{\prime \prime} \times 1.414=9.898^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& 4 A=28^{\prime \prime} \\
& 4 B=39.592^{\prime \prime} \\
& 28+39.592=67.592^{\prime \prime}
\end{aligned}
\] & \\
\hline & \begin{tabular}{l}
Cut Strip width 2.5" \\
Finished size - 2"
\end{tabular} & \[
\begin{aligned}
& A=4 \times 2^{\prime \prime}=8^{\prime \prime} \\
& B=8 \times 1.414=11.312^{\prime \prime}
\end{aligned}
\] & \[
\begin{aligned}
& 4 \mathrm{~A}=32^{\prime \prime} \\
& 4 \mathrm{~B}=45.248^{\prime \prime} \\
& 32+45.248=77.248^{\prime \prime}
\end{aligned}
\] & \\
\hline
\end{tabular}

\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|c|}{ YIELD - Number of angled cuts from a 42" width of fabric (generous, accounting for sliver trimming to } \\
maintain the \(45^{\circ}\) angle when cutting) \\
\hline Cut Strip width & Number of angled cuts & Cut Strip width & Number of angled cuts \\
\hline \(1 \frac{1}{2 \prime \prime}\) & \(17-18\) diamonds & \(21 / 2^{\prime \prime}\) & \(10-11\) diamonds \\
\hline \(1 \frac{3}{4} 4^{\prime \prime}\) & \(16-17\) diamonds & \(2 \frac{3}{4}\) & \(9-10\) diamonds \\
\hline \(2^{\prime \prime}\) & \(12-13\) diamonds & \(3^{\prime \prime}\) & \(8-9\) diamonds \\
\hline \(214^{\prime \prime}\) & \(12-13\) diamonds & & \\
\hline
\end{tabular}

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Designing a bed quilt with 3 side borders or "drops":
- The bed consists of several planes:
- Top surface (horizontal to the floor)
- Sides of the mattress (vertical drop, perpendicular to the floor)
- Foot of the mattress (vertical drop, also perpendicular to the floor)
- Upper border (lies beneath the pillows) or
- Pillow Tuck area (attached as a large band separating the medallion and the uppermost border, which lays across the pillows).

\section*{Examples of medallion designs, displayed on a bed}

The following photos were found online - maker unknown. See more design ideas by conducting your own search for "bed quilts" or similar wording.


King-sized bed with star \& compass medallion quilt design, and coordinating throw pillows. Note the pillowtuck area (folded beneath the throw pillows) and the oversized central medallion motif cascades off the surface of the bed, down the sides and foot. A portion of the upper medallion is hidden under the pillow tuck area.


Queen-sized bed quilt with strong border combination at the mattress crest, and simple drop side borders of solid-colored fabric panels. Note the pillow tuck border at the top with two half-stars. The medallion sits squarely on the bed surface. The wide plain border is a great place to feature a beautiful quilting stitch design, applique or other motifs.

(caption, next page)
Variation of the Rainbow Split Broken Star (pattern for the star medallion in Quick Star Quilts \& Beyond by Jan Krentz) with additional narrow rainbow "French Braid" border and binding, and an original overall design including the pillow tuck.

Jan's thoughts: The quilt may be shown on a 54 " wide Full sized bed. The central medallion star in the quilt pattern measures \(58^{\prime \prime} \times 58^{\prime \prime}\) without borders and beautifully fits a 60 " wide Queen bed.

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Questions? E-mail Jan at: jan@jankrentz.com

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