

String Art Fun Maths - Christmas pudding with holly

These instructions are copyright © 2011 DJ Designs.
Published at www.stringartfun.com

Reproduction of this string art pattern is allowed for personal or teaching use. This copyright notice should appear on all copies of the pattern.

Pictures produced from this pattern and sold or presented as a gift should include the following wording on the back:
"Copyright © 2011 DJ Designs - www.stringartfun.com".

This pattern is exclusively available from www.stringartfun.com.

Key Stage 2 Maths (8 -11 years old)

Directions - This pattern is designed to be used in a classroom as a fun Christmas maths activity and can be drawn on to the template given or the template could be pinned to board by the numbers directed by the answers to the maths questions and used as a string art with the template ripped away afterwards. As this is a continual line it is not suitable for sewing on to card.

Differentiation by outcome -

Most children will have created a 16 point star with an outer circle. Some will not have progressed so far and create a 16 point star. Some will have progressed further and create a 16 point star with an outer circle and holly leaves.

Materials (1 per child) - Question sheet, template, brown pencil, green pencil, ruler.

When printing the pattern please set your printer scaling to "None" if available. If there is a "Fit to page" setting on your printer settings then make sure this is not selected.

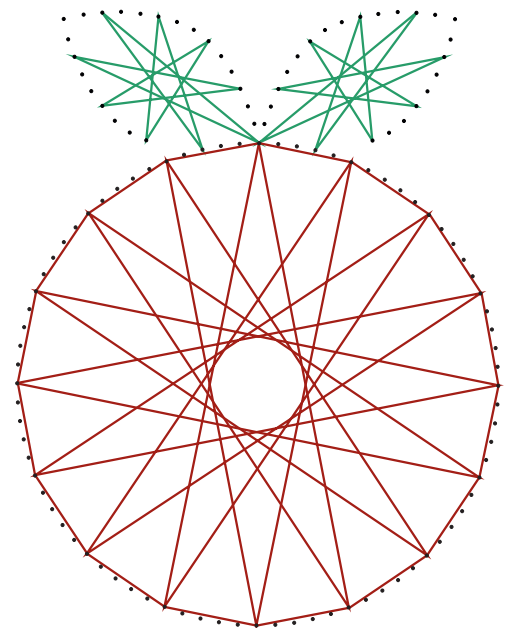
The page is based on an A4 sheet (210 x 297 mm or 8¼ x 11½ inches) but should print on slightly different sized sheets correctly if the scaling is set as suggested above.

The pattern size is given as a guide and may vary slightly on your printer. If it varies then centre the pattern on your picture base as necessary.

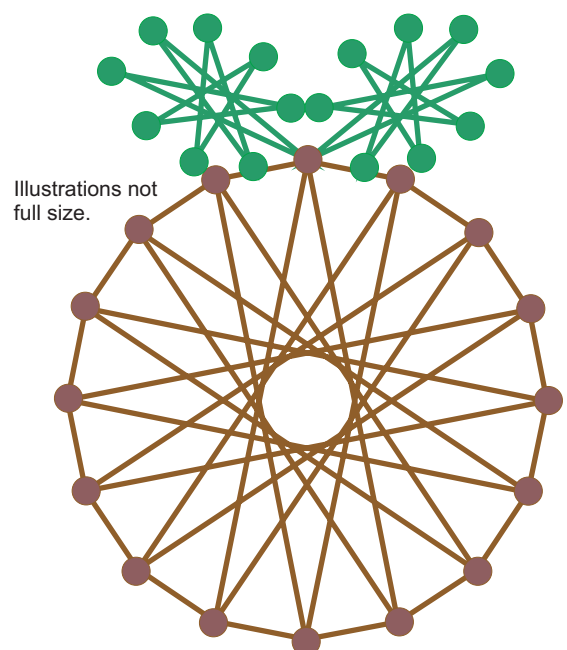
If you decide to use the pattern for string art there are some general instructions at the end of the pattern sheets. Many of the numbered points are unused. Do not add pins or nails to the unused points. See the finished diagram for more information.

The illustration shows drawing pins (thumb tacks) with coloured tops. If you are using drawing pins then you could use several layers of strong cardboard for the backing. If you use small nails then a stronger backing board such as cork or wood should be used. We have used green and brown wool for the string.

Math questions set by Sonya Jefferson.
Copyright © 2011 String Art Fun - www.stringartfun.com
This pattern is exclusively available from www.stringartfun.com



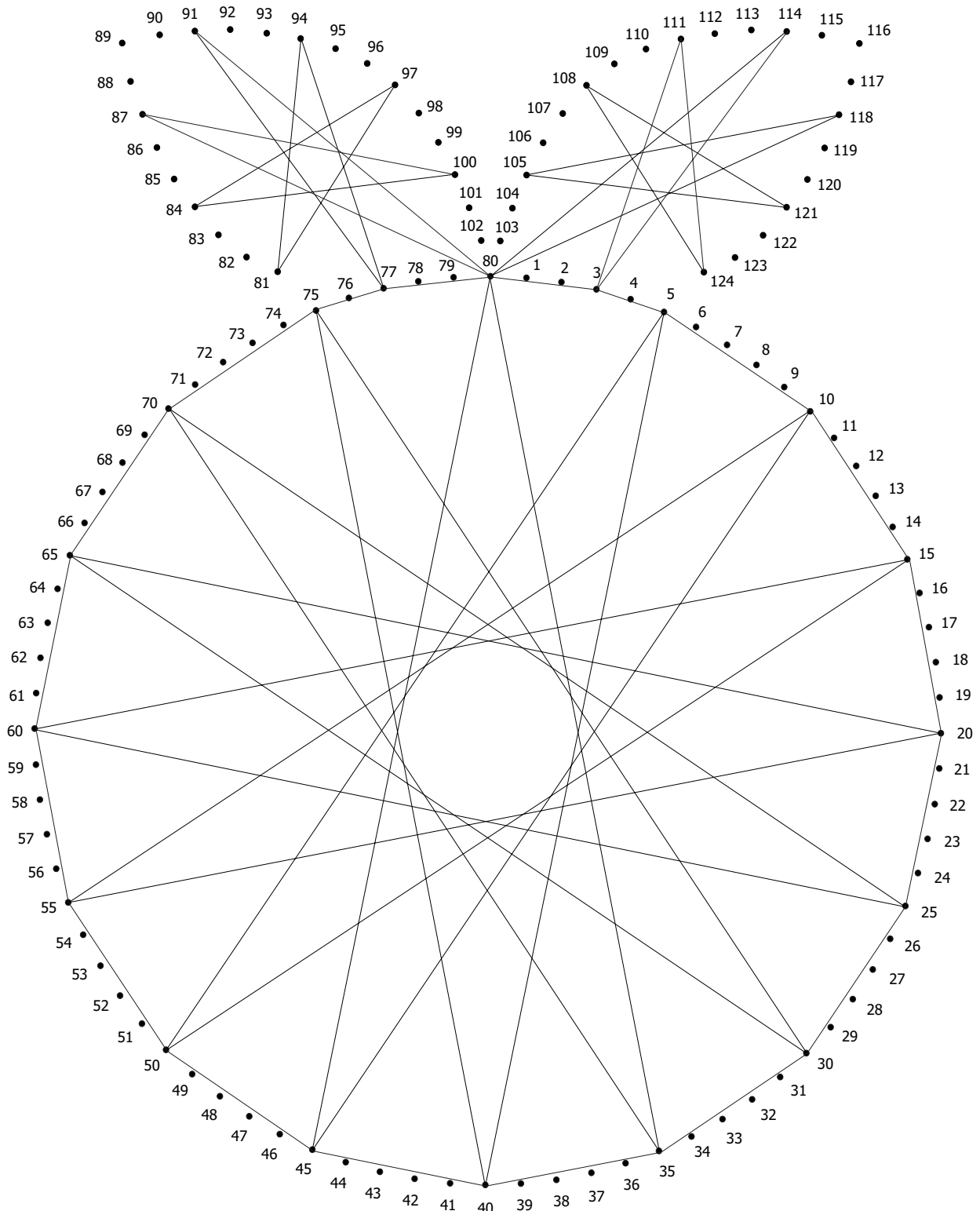
Drawn with colour pencils and a ruler.



Drawing pins and coloured wool.

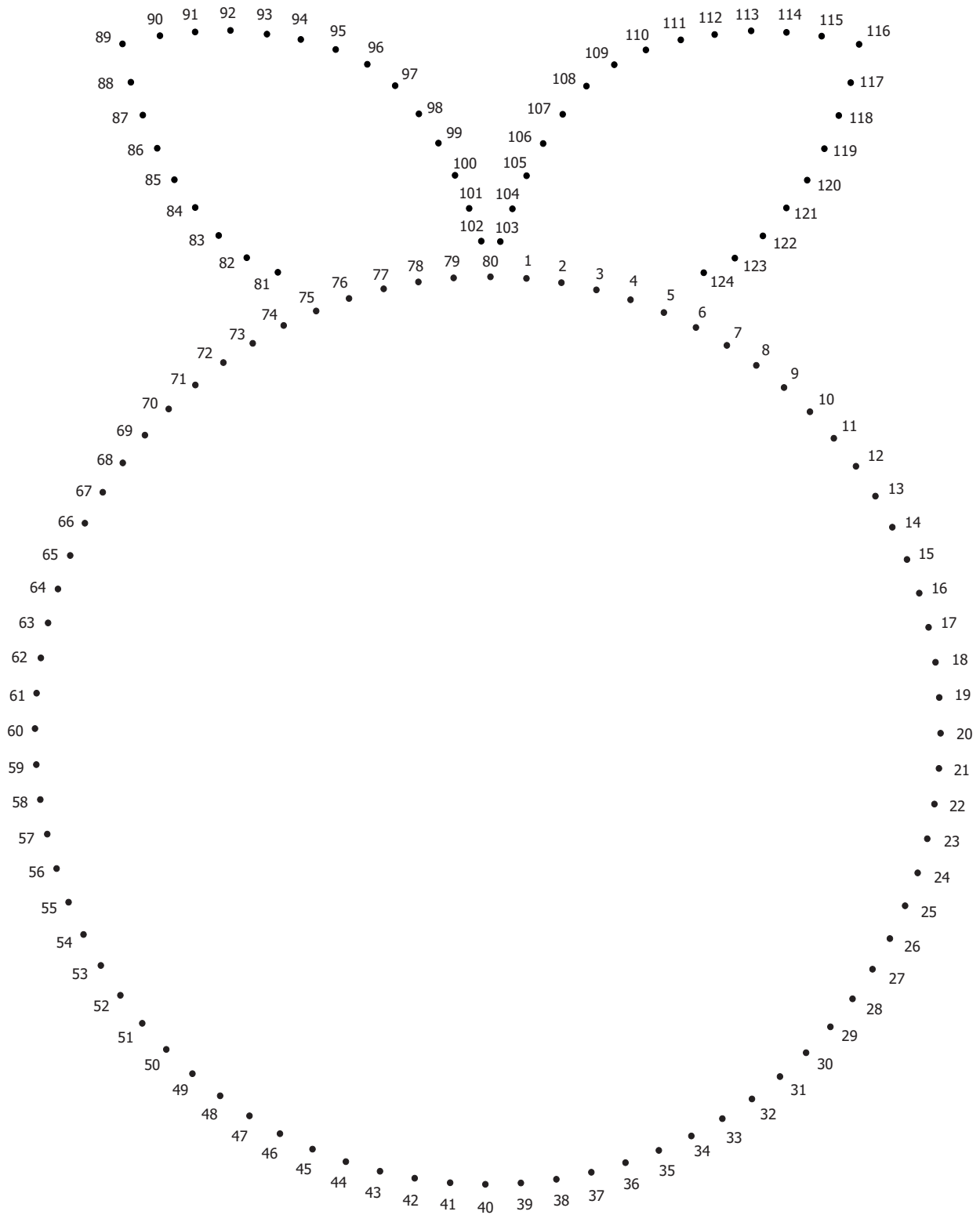
String Art Fun Maths - Christmas pudding with holly

This is the finished result.



← 190 mm 7½ inches →

String Art Fun Maths - Christmas pudding with holly



String Art Fun Maths - Christmas pudding with holly

Pudding Star - brown 5 and 10 x tables)

Start at $10 \times 8 =$
draw a line with a ruler to $7 \times 5 =$
from there draw a line to $7 \times 10 =$
from there draw a line to $5 \times 5 =$
from there draw a line to $10 \times 6 =$
from there draw a line to $5 \times 3 =$
from there draw a line to $10 \times 5 =$
from there draw a line to $1 \times 5 =$
from there draw a line to $5 \times 8 =$
from there draw a line to $10 \times 7 + 5 =$
from there draw a line to $6 \times 5 =$
from there draw a line to $12 \times 5 + 5 =$
from there draw a line to $5 \times 4 =$
from there draw a line to $11 \times 5 =$
from there draw a line to $2 \times 5 =$
from there draw a line to $9 \times 5 =$
from there draw a line to $8 \times 10 =$

Pudding outline - brown addition and subtraction

Start at $40 + 40 =$
Draw a line with a ruler to $37 + 38 =$
from there draw a line to $50 + 20 =$
from there draw a line to $29 + 36 =$
from there draw a line to $78 - 18 =$
from there draw a line to $16 + 39 =$
from there draw a line to $25 + 25 =$
from there draw a line to $13 + 32 =$
from there draw a line to $19 + 21 =$
from there draw a line to $16 + 19 =$
from there draw a line to $66 - 36 =$
from there draw a line to $19 + 6 =$

section 2 (continued)

from there draw a line to $12 + 8 =$
from there draw a line to $6 + 9 =$
from there draw a line to $40 - 30 =$
from there draw a line to $27 - 22 =$
from there draw a line to $22 + 58 =$

Leaf 1 - green

Addition of two digit numbers

Start at $50 + 41 =$
draw a line with a ruler to $27 + 53 =$
from there draw a line to $48 + 39 =$
from there draw a line to $40 + 60 =$
from there draw a line to $63 + 21 =$
from there draw a line to $37 + 60 =$
from there draw a line to $53 + 28 =$
from there draw a line to $28 + 66 =$
from there draw a line to $33 + 44 =$
from there draw a line to $63 + 28 =$

Leaf 2 - green

Mixed maths

Start at $89 + 25 = 114$
draw a line with a ruler to $36 \div 12 =$
from there draw a line to $76 + 35 =$
from there draw a line to $85 + 39 =$
from there draw a line to $9 \times 12 =$
from there draw a line to $11 \times 11 =$
from there draw a line to $65 + 40 =$
from there draw a line to $49 + 69 =$
from there draw a line to $8 \times 10 =$
from there draw a line to $37 + 77 =$

String Art Fun Maths - Christmas pudding with holly

The answers

Pudding Star - brown 5 and 10 x tables)

Start at $10 \times 8 = 80$
draw a line with a ruler to $7 \times 5 = 35$
from there draw a line to $7 \times 10 = 70$
from there draw a line to $5 \times 5 = 25$
from there draw a line to $10 \times 6 = 60$
from there draw a line to $5 \times 3 = 15$
from there draw a line to $10 \times 5 = 50$
from there draw a line to $1 \times 5 = 5$
from there draw a line to $5 \times 8 = 40$
from there draw a line to $10 \times 7 + 5 = 75$
from there draw a line to $6 \times 5 = 30$
from there draw a line to $12 \times 5 + 5 = 65$
from there draw a line to $5 \times 4 = 20$
from there draw a line to $11 \times 5 = 55$
from there draw a line to $2 \times 5 = 10$
from there draw a line to $9 \times 5 = 45$
from there draw a line to $8 \times 10 = 80$

Pudding outline - brown addition and subtraction

Start at $40 + 40 = 80$
Draw a line with a ruler to $37 + 38 = 75$
from there draw a line to $50 + 20 = 70$
from there draw a line to $29 + 36 = 65$
from there draw a line to $78 - 18 = 60$
from there draw a line to $16 + 39 = 55$
from there draw a line to $25 + 25 = 50$
from there draw a line to $13 + 32 = 45$
from there draw a line to $19 + 21 = 40$
from there draw a line to $16 + 19 = 35$
from there draw a line to $66 - 36 = 30$
from there draw a line to $19 + 6 = 25$

section 2 (continued)

from there draw a line to $12 + 8 = 20$
from there draw a line to $6 + 9 = 15$
from there draw a line to $40 - 30 = 10$
from there draw a line to $27 - 22 = 5$
from there draw a line to $22 + 58 = 80$

Leaf 1 - green

Addition of two digit numbers

Start at $50 + 41 = 91$
draw a line with a ruler to $27 + 53 = 80$
from there draw a line to $48 + 39 = 87$
from there draw a line to $40 + 60 = 100$
from there draw a line to $63 + 21 = 84$
from there draw a line to $37 + 60 = 97$
from there draw a line to $53 + 28 = 81$
from there draw a line to $28 + 66 = 94$
from there draw a line to $33 + 44 = 77$
from there draw a line to $63 + 28 = 91$

Leaf 2 - green

Mixed maths

Start at $89 + 25 = 114$
draw a line with a ruler to $36 \div 12 = 3$
from there draw a line to $76 + 35 = 111$
from there draw a line to $85 + 39 = 124$
from there draw a line to $9 \times 12 = 108$
from there draw a line to $11 \times 11 = 121$
from there draw a line to $65 + 40 = 105$
from there draw a line to $49 + 69 = 118$
from there draw a line to $8 \times 10 = 80$
from there draw a line to $37 + 77 = 114$

String Art Fun

General Instructions

Printing the pattern.

We recommend printing these Christmas patterns on thin coloured card. This can then be mounted on your backing board as part of the design. The patterns are designed to fit on a printed sheet A4 size (297 mm x 210 mm). This is approximately 8½ inches x 12 inches. If you set the print size as “fit to page” it will work on most other sizes of printing paper.

The nails.

We are using drawing pins (thumb tacks) with coloured tops. These are available from stationers in multi-colour packs. Colours are given as a suggestion but you can use whatever colours are available.

If you decide to use small nails then see the note below about using a stronger backing board.

The backing board.

Various board materials can be used as a base. These Christmas designs use drawing pins and we have found that strong cardboard works as a backing with these. The kind of brown cardboard boxes supermarkets get tinned food delivered in are a good source. Put several layers together so that it is deep enough to take the drawing pins. Double-sided self-adhesive tape can be used to fix them together. Alternatively you could use one layer of cardboard on a sheet of expanded polystyrene (such as a ceiling tile).

If you decide to use small nails then a stronger backing will be required to hold them. Cork floor tiles can also be used. These are available from carpet shops and home improvement stores. They can be cut to the required picture size with a craft knife and metal straight edge or ruler. Make a sandwich of two or three tiles so that the base is about 12 mm (1/2 inch) thick. Fibre board or chipboard could also be used.

String.

We have used decorative cord and ribbon for the string. Lots of glittery Christmas colours are available in the hobby shops as Christmas approaches. The designs have been kept simple so that thick string or narrow ribbon can be used.

Tie the end of your first string on to the first pin or nail of the sequence.

Work the design slowly to start with until you are familiar with the sequence.

These instructions are copyright © 2011 DJ Designs.

Published at www.stringartfun.com

E-mail contact@stringartfun.com

Reproduction of this string art pattern is allowed for personal use. This copyright notice should appear on all copies of the pattern.

Pictures produced from this pattern and sold or presented as a gift should include the following wording on the back:

“Copyright © 2011 DJ Designs - www.stringartfun.com”.

This pattern is exclusively available from www.stringartfun.com.