

# Merlin's Mat

Designed by David Mitchell

Merlin's Mat is a square of paper that has been folded into a grid of carefully positioned creases. This grid can be collapsed into a variety of flat shapes, or motifs, many of which are suggestive of the Arthurian cycle of legends. This gave me the idea for the name of this puzzle and for the explanatory legend on page 4.

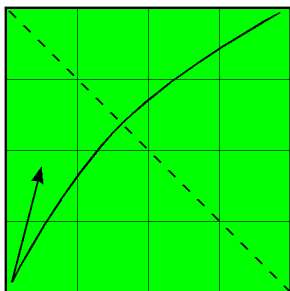
The primary challenge is to fold Merlin's Mat to produce the series of flat motifs shown on page 3 using only the existing grid of creases and, hopefully, without accidentally making any more.

You will find that many of the motifs can be solved in several ways. The supplementary challenge is to try to find the most elegant and symmetrical solution possible.

You will be able to solve most of the motifs for yourself without difficulty. A few will take a little more effort. A solution for the Cross, which is by far the most challenging of the motifs to solve, is provided on the main Puzzles page of my origamiheaven.com website.

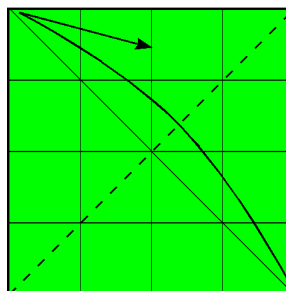
Merlin's Mat is made from a single square of paper, ideally one that is the same colour both sides. Begin by folding your square into a 4x4 grid then follow steps 1 to 7 below. Before you try to solve the motifs make sure all the creases work easily as hinges in both directions, backwards as well as forwards. Good luck!

1



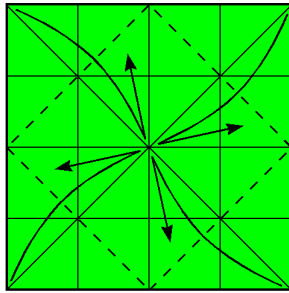
1. Fold in half diagonally, then unfold.

2



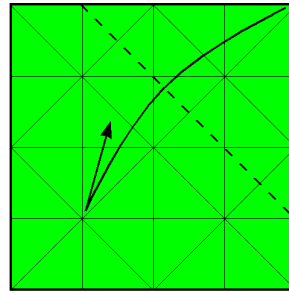
2. Fold in half diagonally in the opposite direction, then unfold.

3



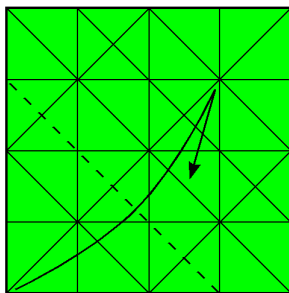
3. Fold all four corners into the centre, then unfold.

4



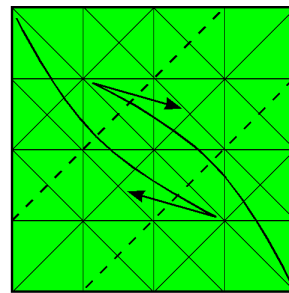
4. Fold the top right corner inwards like this, then unfold.

5



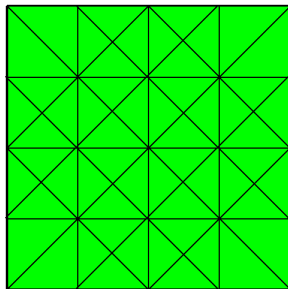
5. Fold the bottom left corner inwards in the same way, then unfold.

6



6. Repeat steps 4 and 5 on the remaining corners.

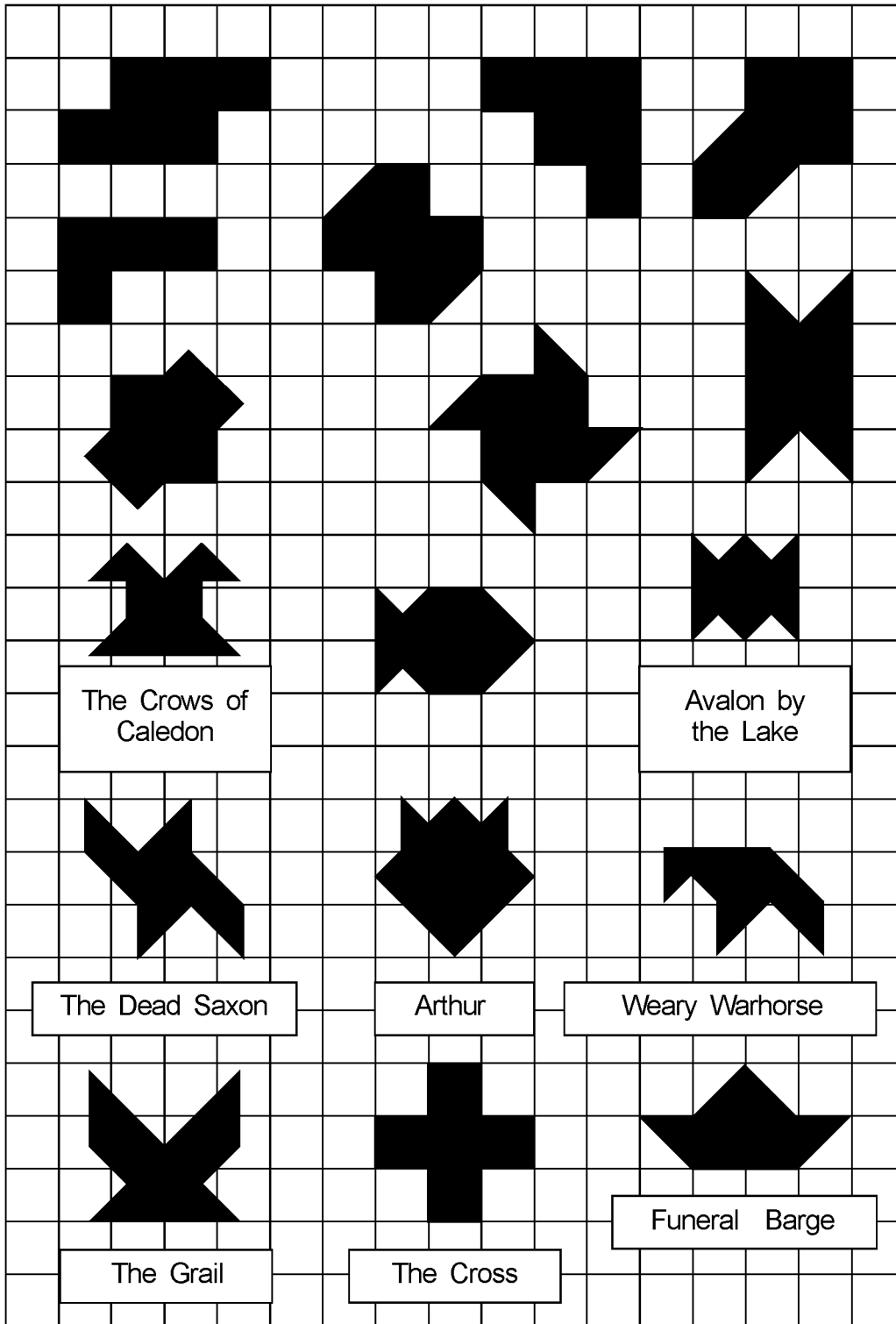
7



7. When it is finished Merlin's Mat should look like this. Check that you have made all the creases shown here and that you have not made any extra ones. Fold backwards and forwards along all the creases until they fold easily in both directions. Now try to collapse the mat to match the motifs on page 3 without adding any new creases to this grid.

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## The Legend of Merlin's Mat

It is said that in his middle-age the wizard Merlin travelled widely in the East in pursuit of the secrets of what men then called enchantment but now more often call technology or science. Among the many sacred arts he learned was that of the manufacture of a stiff but pliable material called paper for which no really useful purpose had yet been found.

One day, not long after Merlin's return to Britain, Arthur had assembled his army to head off a large Saxon incursion into the British heartland. The warriors were sitting down for an eve of battle bash in the Great Hall at Camelot, and a heavy discussion was underway. Should they attack the Saxon host before it swept inland or wait to fight on more advantageous ground? The Arch-Druid had taken the usual auguries but not even the innards of an extremely decrepit sheep could offer a decisive analysis of the strategic situation. In desperation, Arthur turned to Merlin for advice.

'Eh, what?' said Merlin, startled out of a state of deep prophetic inattention. Bored with strategy, Merlin had drawn a sheet of this stiff but fascinatingly pliable material from the inner recesses of his robe and was making a study of its essential properties, folding it this way and that as the fancy took him. At first nothing much had happened, but suddenly, and much to Merlin's consternation, the paper had come alive in his hands and had begun to assume a series of rapidly changing forms. 'The stars,' Arthur repeated gently. 'Tell us what's written in the stars.' Merlin came back to reality fast. Seizing this heaven-sent opportunity to upstage the Druids completely, he threw himself to the ground in a frenzied fit and, with a cry that even woke the hounds asleep in the stables, flung the crumpled sheet at Arthur's head. 'There!' he cried. 'There, oh King is your sign! Just so will your enemies crumple before you.' The paper looped in the air and fluttered down like a one-winged dove to land at the King's feet.

Arthur was quite impressed. Merlin's prophecies usually consisted of such platitudes as 'A romantic affair will turn out well' or 'June is a good time to dig ditches' and, frankly, weren't worth the parchment they were recorded on, so a frenzied fit was a big improvement. He just wasn't so sure about the message. Arthur's instinct was to buy time by a strategic withdrawal. But then, as it so often does in legends, a strange thing happened. Under Arthur's astonished gaze the crumpled sheet of paper writhed, twisted and grew, until there before him lay the body of a dead Saxon warrior, complete in every gory detail.

'Well, Merlin, old chap,' said Arthur, 'it looks like you've really scored this time. Somebody toss that carcass out of here.' There was a rush from the tables but Merlin, showing extraordinary agility for someone over forty, was before them all. Picking up the dead Saxon by one foot, he neatly flattened the body out and tucked it safely away. 'Might well come in useful again,' he was heard to mutter beneath his beard.

On the following day, just as the prophetic vision had foretold, Arthur slaughtered the Saxon host. Merlin's position at court was now secure and in due course he used this new method of divination to predict many more of Arthur's glorious deeds.