

DEAR Dr Maths,  
I have just finished reading Dan Brown's book *The Da Vinci Code*. The book discusses many maths topics, especially the significance given to certain special shapes and their links with religion. Could you explain to me why mathematically these shapes are so special?  
Robert  
Walsend.

Many shapes have been given religious significance through the ages. The cube for instance has special significance to the Jewish, Christian and Islamic faiths, representing "all that is". In 500 BC the mathematician Pythagoras thought that interlaced triangles represented the inseparable unity of spirit and matter.

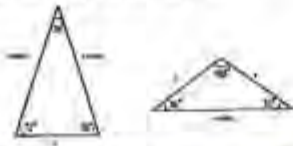


From a religious point of view, various historical links have been made to the pentagon and pentagram or pentacle, a five-

pointed star. These feature in *The Da Vinci Code*.

When an apple is cut, the core reveals a pentagram, and in mythology this is said to relate to the fall of man in eating from the Tree of Knowledge.

The mathematical history of these shapes goes back to Euclid, the great Greek geometer of the Third Century BC. His collected works of geometry, *Euclid Elements*, can still be bought today, signifying their continued importance. Euclid demonstrated that the number Phi, 1.61803... could be found in a certain group of special triangles.



By using these triangles you can find the Phi ratio hidden in pentagons, pentagrams and decagons.



Many, including Leonardo Da Vinci, and more recently Dan Brown, have tried to show that the number Phi has more than just mathematical importance, but has a divine link to our spiritual past. Interestingly, this number appears in many different areas, not only in shapes but also in nature and art. For more information on this log on to the following website,

<http://www.mcs.surrey.ac.uk/RL.Knott/Fibonacci/fib.html>. There are many other special numbers such as Pi, which is 3.14159265... and Euler's number 2.7182818..., which appear throughout nature and have been accorded any religious importance, but which are of technological advancements such as electricity.

It is amazing to think that the Phi, born in Greek matter some two-and-a-half thousand years ago, are still having an impact in the fiction we read and films we watch today.

From the illustrations given, what is the angle of each point in a pentagram?

The first correct entry drawn a copy of the book *The Da Vinci Code* by Dan Brown. This book is also available from Waterstones Newcastle.

Do you have a maths question? Write to Dr Maths, Chronicle, Groat Market, Newcastle NE1 1ED or e-mail [DRMaths@hotmail.co.uk](mailto:DRMaths@hotmail.co.uk)