Investigation
Table digital roots

1. Choose a times table.
   Write out the multiples from the 1st to the 12th.

2. Add the digits of each answer and keep adding until you have the digital root of each multiple up to the 12th.

3. Repeat this with another times table.

4. Check that, between you, your group has covered every table from 1 to 12.

5. Compare patterns.

1 x 8 = 8	→	8		
2 x 8 = 16	→	7		
3 x 8 = 24	→	6		
4 x 8 = 32	→	5		
5 x 8 = 40	→	4		
6 x 8 = 48	→	12	→	3
...				

Challenge

Which tables have the same patterns of digital roots? Can you spot the pattern? Together, make a hypothesis.

6. Draw the pattern of the digital roots by joining points on a circle where the circumference has 9 equally spaced marks.

7. Check your hypothesis.