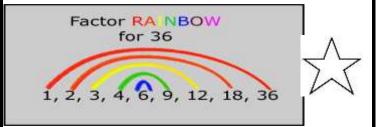## 11.1 Identify pairs of factors for all 2 digit numbers.

Fact file :

To **factor** a **number** means to break it up into **numbers** that can be multiplied together to get the original **number**. EXAMPLES: 6 = 3 x 2 so, **factors** of 6 are 3 and 2

Factor RAINBOW
for 36

1, 2, 3, 4, 6, 9, 12, 18, 36

11.2 Know by heart all the square numbers up to 12 X 12

Eg:

2 X 2 = 4

6 X 6 = 36

11 X 11 = 121

12 X 12 = 144

Roll a dice then multiply the number by itself. How many can you answer in 30 seconds? Once you are confident with one dice, try two dice

11.3 Know by heart all the cube numbers up to 12 cubed

Eg 3 cubed = 3 x 3 x 3 = 27

7 cubed = 343

12 cubed = 1728

Use a pack of playing cards. Jack counts as 11 and Queen as 12. Turn over a card and cube the value. How many facts can you recall in 30 seconds?
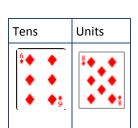
11.4 Recognise and recall factors of numbers to 100 and corresponding multiples of 100

Use the Maths mat to make a two digit number. Can you name all the factors? (factors of 68 are 1, 2, 4, 17, 34 and 68) Next step: Which two numbers could you multiply together to make 6800? (eg 20 X 340)

Tens	Units

The Milky Way

Colour the star when you think you have the skill. Remember, you should aim to answer each question in 3 seconds (try to answer 10 or more in 30 seconds). Your teacher will let you know the next time there's an assessment.

11.5 Use knowledge of place value and multiplication facts up to 12 X 12 to derive related multiplication and division facts involving decimals.

Eg 0.6 X 8 = 4.8

3.2 ÷ 8 = 0.4

How many different decimal calculations can you think of using the number fact that 7 x 8 = 56?
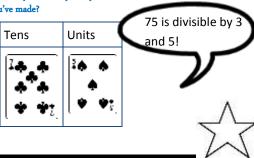
(eg 5.6 ÷ 7 = 0.8

or 0.07 X 8 = 0.56)

11.6 Know by heart tests of divisibility for multiples of 2, 3, 4, 5, 6, 9 and 10

Playing cards :

Remove the picture cards and 10s from the pack. Pick two cards and place them on the maths mat. What divisibility facts can you say about the number you've made?

Tens	Units

75 is divisible by 3 and 5!

Top tip: Learn the divisibility number facts overleaf. Don't forget to watch out for prime numbers!

2	Integer ending in 0, 2, 4, 6, 8
3	Sum of the digits is a multiple of 3
4	The last two digits form a number which is a multiple of 4
5	Integer ending in 0 or 5
6	The number is divisible by 2 **and** 3
9	Sum of all the digits is a multiple of 9
10	Integer ending in 0

Don't forget to try **MyMaths or sumdog** for great games and ideas to improve your mental maths skills. Also try challenging yourself against the clock. Can you beat your personal best?

MyMaths.co.uk