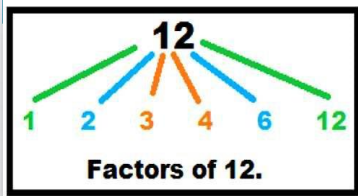


Primes, Factors & multiples

Facts

Prime Number	A number with exactly two factors. A number that can only be divided by itself and one. The number 1 is not prime, as it only has one factor, not two.	The first ten prime numbers are: 2,3,5,7,11,13,17,19,23,29
Lowest Common Multiple (LCM)	The smallest number that is in the times tables of each of the numbers given.	The LCM of 3, 4 and 5 is 60 because it is the smallest number in the 3, 4 and 5 times tables.
Highest Common Factor (HCF)	The biggest number that divides exactly into two or more numbers.	The HCF of 6 and 9 is 3 because it is the biggest number that divides into 6 and 9 exactly.



Factors

Factors are numbers that go into a bigger number. They Come in pairs. Can you see the colour coordinated pairs that go into 12 above?

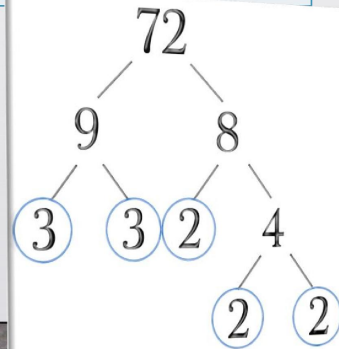
Multiples

Multiples are simply times tables.

The multiples of 7 are:
7, 14, 21, 28 etc

Prime Factors

You can make any number by factors until you get to a factor that is a prime number. Here 72 has first been split into its factors 9 & 8. From there, 9 has been split into 3 & 3 which are both prime. 8 has been broken down too, but it takes an extra step to arrive at 2, 2, & 2



PRIMES, FACTORS & MULTIPLES

	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

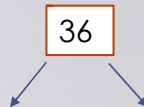
Task 1

You already know the first 10 Prime Numbers from the other side of the sheet.

However, If you now circle the number 2 and then cross out all the other multiples of 2; circle out 3 and cross out all the multiples of 3; you will eventually be left with all the other prime numbers circled on the grid

Task 2

Remember, we can make any number just by multiplying prime numbers together. Try the number 36, think of two numbers that multiply to make 36, if one of them is prime, stop! If the number isn't prime, do the same again, find two numbers that go into that number.



Once you've mastered 36, try:

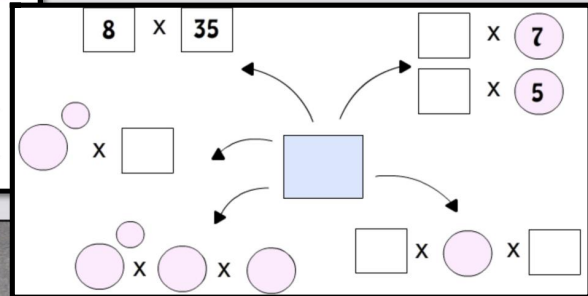
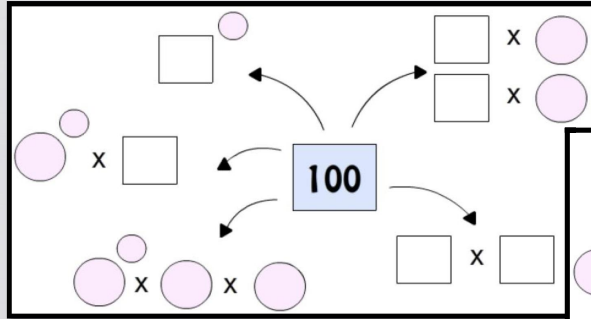
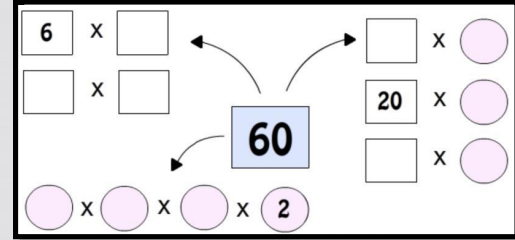
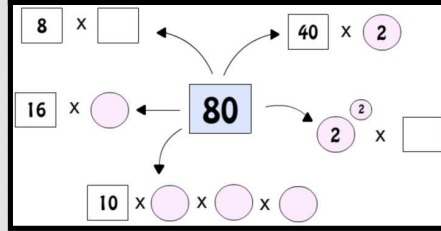
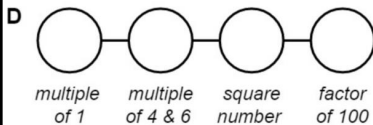
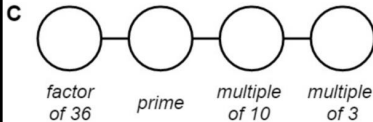
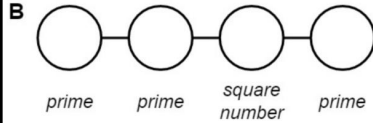
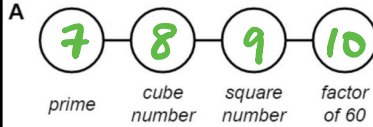
18	30	50
42	36	90
75	48	63
120	108	200

PRIMES, FACTORS & MULTIPLES

consecutive chains

Use the clues to find sets of increasing consecutive numbers. All numbers used are less than 100.

primes & composites



PRIMES, FACTORS & MULTIPLES

Squares & Cubes CrossNumber

Use the clues to work out which numbers go in the grid.

Across

1. The square of 7
2. 9 squared
5. 4^2
8. 5 cubed
10. Square root of 121
13. Three cubed
14. Six squared
15. Square root of 100
16. $\sqrt[3]{2744}$

Down

1. 20^2
4. $\sqrt[3]{216}$
7. $\sqrt{121}$
9. Five squared
11. 12^2
12. $\sqrt{169}$

