

Prime Factorisation and Number of factors

1) 6 12 15 21 23 25 30 32 35 36 45 70 81

For each of the numbers above, write down:

(a) a list of its factors (b) how many factors it has (c) its prime factorization

2) By looking at the answers to Q1, write down as many rules as you can find linking a number's prime factorisation with the number of factors it has. Test your rules on other numbers.

3) Write down a number, different to any of those above, with

(a) 1 factor (b) 2 factors (c) 3 factors (d) 4 factors (e) 5, 6, 7, 8, 9,10 factors

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