1. Make a factor tree for 36. Write 36 as a product of prime numbers

2. For each number, make a factor tree and use it to write as a product of primes.

a) 28 b)300 c)37 d)64

3. Find the missing prime numbers

a) 20 = 22? b) 54 = ? 333

4. Write 70 as a product of primes. Use your product to decide which of these numbers are factors of 70.

5. The product 3333 can be written as 34 using indices. Write these products using indices.

a) 555 b) 22222 c) 7777

6. Match an expression on the left with it’s value on the right.

24 32 43 23 8 16 9 64

7. a) Find the value of a3 when a=6.

b) Find the value of x5 when x=7.

8. Copy and complete the crossnumber puzzle.

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| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Across  1 3272  4 3522  5 8324  7 73 | Down  1 25+23  2 39  3 2823  5 522  6 43-13 |
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9. Make a factor tree for 360. Write 360 as a product of prime numbers using indices.

10. Write the following numbers as products of primes using indices.

a) 72 b)100 c) 392

11. Write 198 as a product of primes. How does your product show that 6 is a factor of 198?

12. Write 175 as a product of primes. How does your product show that 15 is **not** a factor of 175?