

Exponent power: More power problems

Use these tables for reference when solving the problems on this page.

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|----------|--------|
| 2^1 | 2 |
| 2^2 | 4 |
| 2^3 | 8 |
| 2^4 | 16 |
| 2^5 | 32 |
| 2^6 | 64 |
| 2^7 | 128 |
| 2^8 | 256 |
| 2^9 | 512 |
| 2^{10} | 1 024 |
| 2^{11} | 2 048 |
| 2^{12} | 4 096 |
| 2^{13} | 8 192 |
| 2^{14} | 16 384 |

| | |
|----------|-----------|
| 3^1 | 3 |
| 3^2 | 9 |
| 3^3 | 27 |
| 3^4 | 81 |
| 3^5 | 343 |
| 3^6 | 729 |
| 3^7 | 2 187 |
| 3^8 | 6 561 |
| 3^9 | 19 683 |
| 3^{10} | 59 049 |
| 3^{11} | 177 147 |
| 3^{12} | 531 441 |
| 3^{13} | 1 594 323 |
| 3^{14} | 4 782 969 |

| | |
|----------|---------------|
| 5^1 | 5 |
| 5^2 | 25 |
| 5^3 | 125 |
| 5^4 | 625 |
| 5^5 | 3 125 |
| 5^6 | 15 625 |
| 5^7 | 78 125 |
| 5^8 | 390 625 |
| 5^9 | 1 953 125 |
| 5^{10} | 9 765 625 |
| 5^{11} | 48 828 125 |
| 5^{12} | 244 140 625 |
| 5^{13} | 1 220 703 125 |
| 5^{14} | 6 103 515 625 |

1. Find as many pairs of factors as you can that multiply to 2048, e.g. $2 \times 1\,024 = 2\,048$
2. If $25^2 = 625$, how do you find the square of numbers in these tables?
3. If the square root of 81 is 9 ($\sqrt{81}=9$), how can you find the square root of numbers in these tables?
4. Try dividing a power of two by a different power of two.
For example, $4096 \div 512 =$
Is the answer always in the table? Why? Does that work for powers of three and five?