

Prime Numbers



A prime number can be divided, without a remainder, only by itself and by 1. For example, 17 can be divided only by 17 and by 1.

Some facts:

- The only even prime number is 2. All other even numbers can be divided by 2.
- If the sum of a number's digits is a multiple of 3, that number can be divided by 3.
- No prime number greater than 5 ends in a 5. Any number greater than 5 that ends in a 5 can be divided by 5.
- Zero and 1 are not considered prime numbers.
- Except for 0 and 1, a number is either a prime number or a composite number. A composite number is defined as any number, greater than 1, that is not prime.

To prove whether a number is a prime number, first try dividing it by 2, and see if you get a whole number. If you do, it can't be a prime number. If you don't get a whole number, next try dividing it by prime numbers: 3, 5, 7, 11 (9 is divisible by 3) and so on, always dividing by a prime number (see table below).

Here is a table of all prime numbers up to 1,000:

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 2 | 3 | 5 | 7 | 11 | 13 | 17 | 19 | 23 |
| 29 | 31 | 37 | 41 | 43 | 47 | 53 | 59 | 61 | 67 |
| 71 | 73 | 79 | 83 | 89 | 97 | 101 | 103 | 107 | 109 |
| 113 | 127 | 131 | 137 | 139 | 149 | 151 | 157 | 163 | 167 |
| 173 | 179 | 181 | 191 | 193 | 197 | 199 | 211 | 223 | 227 |
| 229 | 233 | 239 | 241 | 251 | 257 | 263 | 269 | 271 | 277 |
| 281 | 283 | 293 | 307 | 311 | 313 | 317 | 331 | 337 | 347 |
| 349 | 353 | 359 | 367 | 373 | 379 | 383 | 389 | 397 | 401 |
| 409 | 419 | 421 | 431 | 433 | 439 | 443 | 449 | 457 | 461 |
| 463 | 467 | 479 | 487 | 491 | 499 | 503 | 509 | 521 | 523 |
| 541 | 547 | 557 | 563 | 569 | 571 | 577 | 587 | 593 | 599 |
| 601 | 607 | 613 | 617 | 619 | 631 | 641 | 643 | 647 | 653 |
| 659 | 661 | 673 | 677 | 683 | 691 | 701 | 709 | 719 | 727 |
| 733 | 739 | 743 | 751 | 757 | 761 | 769 | 773 | 787 | 797 |
| 809 | 811 | 821 | 823 | 827 | 829 | 839 | 853 | 857 | 859 |
| 863 | 877 | 881 | 883 | 887 | 907 | 911 | 919 | 929 | 937 |
| 941 | 947 | 953 | 967 | 971 | 977 | 983 | 991 | 997 | |