Number Theory and Primes

The secrets of whole numbers

WHAT IS IT?

Number theory studies whole numbers and their patterns: factors, multiples, primes and remainders. It looks simple, yet it supports modern codes that keep online messages private.

1	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

gold = prime numbers

THE BIG IDEAS

1. A prime has exactly two factors: 1 and itself.
2. Every whole number above 1 is a prime or a product of primes.
3. Remainders give clock arithmetic: 15 o'clock is 3 o'clock.
4. The greatest common factor and least common multiple help with fractions.

YOU SEE IT WHEN ...

- Simplifying fractions
- Check digits on barcodes and book numbers
- Codes that protect online payments

WORDS YOU WILL MEET

Prime
a number with exactly two factors

Composite
a number with more than two factors

Factor
a number that divides another exactly

Multiple
a number you get by multiplying

Remainder
what is left after dividing

Divisible
leaves no remainder

GOOD TO KNOW FIRST

Times tables and division.

IN YOUR COURSE YOU WILL ...

- Find factors and prime factorizations
- Practice clock (modular) arithmetic
- Use GCF and LCM
- Try the Sieve of Eratosthenes

Start tip: Test divisibility by 2, 3, 5 and 10 before long division.

creouts.com · © Creouts Publishing · Free for home and classroom use · Not for resale or redistribution