GRE Number Properties Quick Reference

Essential Rules & Formulas for Quantitative Reasoning

Integer Classifications

- Even: divisible by 2 (e.g., -4, 0, 8)
- Odd: not divisible by 2 (e.g., -3, 1, 9)
- Prime: only two positive divisors (e.g., 2, 3, 5, 7, 11)
- Consecutive: numbers in order (e.g., 4, 5, 6, 7)

Divisibility Rules

- 2: last digit even
- 3: sum of digits divisible by 3
- 4: last 2 digits divisible by 4
- 5: ends in 0 or 5
- 6: divisible by 2 and 3
- 9: sum of digits divisible by 9
- 10: ends in 0

Prime Factorization

- Break number into prime factors using division
- 24 = 2 × 2 × 2 × 3
- 36 = 2 × 2 × 3 × 3
- 60 = 2 × 2 × 3 × 5

Exponent Rules

- a^m × a^n = a^(m+n)
- a^m ÷ a^n = a^(m−n)
- (a^m)^n = a^(m×n)
- a^0 = 1 (a ≠ 0)
- a^(−n) = 1/(a^n)

Absolute Value

- |x| = distance from 0
- Equation: |x| = a ⇒ x = ±a

Fraction-Decimal-Percent Equivalents

Fraction	Decimal	Percent
1/2	0.5	50%
1/3	0.333...	33.3%
1/4	0.25	25%
1/5	0.2	20%
1/8	0.125	12.5%
2/3	0.666...	66.7%
3/4	0.75	75%
3/8	0.375	37.5%
5/8	0.625	62.5%
7/8	0.875	87.5%