Calculus I

FINAL EXAM REVIEW SHEETS / 8 pages / 16 worked ideas

01 LIMITS

Try substitution, then algebra if you see 0/0.

Direct substitution

RULE

$$\lim_{x \to a} f(x) = f(a)$$

DECISION CUE / TRAP

Use when the expression is continuous at a.

TRY IT

$$\lim_{x \to 2} (x^2 + 3x)$$

WORKED STEP

$$2^2 + 3 \cdot 2 = 10$$

COVER & RECALL / REDO THE EXAMPLE WITHOUT LOOKING

Factor a zero over zero

RULE

$$x^2 - a^2 = (x - a)(x + a)$$

DECISION CUE / TRAP

Factor first, then cancel away from the excluded point.

TRY IT

$$\lim_{x \to 3} \frac{x^2 - 9}{x - 3}$$

WORKED STEP

$$\lim_{x \to 3} (x + 3) = 6$$

COVER & RECALL / REDO THE EXAMPLE WITHOUT LOOKING

SAMPLE

Watermarked sample - full pack has 8 pages and 16 worked ideas