

# Calcquest — Concept Poster

*Print this and pin it up — an at-a-glance map of the Calcquest cast and the ideas each one carries. Come back to it whenever you want to remember who teaches what.*

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## Meet the cast — and what each one teaches

| Character | What they carry                              |
|-----------|----------------------------------------------|
| Vela      | Limits — approaching a value                 |
| Nayeli    | Instantaneous rate of change / tangent slope |
| Rasmus    | Accumulation / integral-as-sum               |
| Thessaly  | Function transformation                      |
| Ilse      | Continuity & discontinuity                   |
| Marek     | Asymptotic / end behavior                    |
| Leda      | Optimization / extrema                       |
| Maren     | Related rates                                |
| Soraya    | Sequences & series / convergence             |
| Adaeze    | (Mentor) — guides reflect-on-approach        |

# Key ideas at a glance

*The big concepts this cast helps you master:*

- Functions & average rate of change — precalculus foundation
  - Limits — the value a function approaches
  - Continuity — where a function is unbroken
  - The derivative — instantaneous rate of change
  - Differentiation rules — power, product, quotient, chain
  - Interpreting  $f'$  and  $f''$  — slope, monotonicity, concavity
  - Optimization — finding maxima and minima
  - Related rates — linked changing quantities
  - Antiderivatives — reversing differentiation
  - Riemann sums — accumulation as adding up pieces
  - The definite integral — accumulation as a total
  - The Fundamental Theorem of Calculus — the derivative–integral link
  - Function transformations — shifting and scaling graphs
  - Exponential and logarithmic functions — growth, decay,  $e$  and  $\ln$
  - Sequences and series — convergence and divergence
  - Capstone — integrating rates and accumulation on real models
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