Reminders: 1) Take the Fall Exam Survey (Remind message link)
2) Fall Exam Detail:
16 MC, 90 mins, open notes, show work for credit
3) Will not go in gradebook if you do poorly
4) Penalty for late submission
5) Exam is curved (TBD)

AP Calculus AB Fall Exam Topics 2020

1) Limits (ch. 1)

2) L'Hopital's Rule (Ch. 2)

3) Continuity and Continuity Conditions (ch. 1.4)

4) Finding Derivatives, Tangent Line Equations (Ch. 2)

*Product Rule, Quotient Rule, Chain Rule, Implicit Differentiation

5) Finding Average Rate of Change (Ch. 2) → slope $\frac{\text{change in position}}{\text{change in time}}$ → Avg. velocity

6) Particle Motion (Position – Velocity – Acceleration) - Ch. 2

*Velocity sign line, intervals moving left/right, increasing/decreasing speed/velocity

7) Continuous/Differentiable Piecewise Functions (Ch. 2) (share same slope) → set equations equal → set derivatives equal

8) Related Rates (2.6) (Volume, Surface Area, cones, similar triangles)

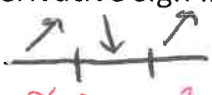
9) Linear Approximation (Ch. 3) i) find tangent line equation ii) plug in decimal in for x.

10) Theorems: IVT, EVT, Rolle's, MVT (Ch. 3)

11) Interpreting Derivative Graphs : f '(x) and f ''(x) (Ch 3)

12) First Derivative Test, First derivative sign line, 2nd derivative sign line (Ch. 3)

* Relative extrema, intervals increase/decrease


f'(x) sign line


f''(x) sign line

13) New Derivative Rules (Ch. 2, 5)

*Derivative Rules involving Trig, Arc Trig, Logs, Exponentials

14) Expanding Log terms before finding derivative (Ch. 5) (product, quotient, power property)

15) Log Differentiation (Ch. 5) $y = (x+3)^{4x}$ → $\ln y = \ln(x+3)^{4x}$

16) Finding Derivative of Inverse at a point (Ch. 5)

$f(a) = b$	$f^{-1}(b) = a$
$f'(a) = n$	$(f^{-1})'(b) = \frac{1}{n}$