Checklist for AP AB Calculus Exam

As we go through each Big Idea Packet please check off whether you understand, almost understand, or don't yet understand each concept. Each question in the Big Idea Packet corresponds to the numbers on the checklist. Remember, only one question is asked about each concept in the packets and there are many ways to ask a question about a concept. Thus, if you were able to answer this one question, but weren't confident or you were shaky on the main idea of the concept, don't check that you understand it. Answer the questions that follow each big idea.

Topic:	Don't Know YET	Almost There	Understand It!
All Special Angle Trig Values	?	?	?
Parent Graphs	?	?	?
Big Ide	a #1 Limits		
1. Properties of Limits	?	?	?
2. Two-Sided Limits	?	?	?
3. One-Sided Limits	?	?	?
4. Sandwich Theorem	?	?	?
5. Limits Involving Infinity *End Behavior	?	?	?
6. Limits that equal infinity *Vertical Asymptotes	2	2	2
7. Determining if a function is continuous (using limits)	2	2	2
8. Intermediate Value Theorem *and the script that goes with it	2	2	2
➤ What concepts are you struggling with?			

> What can you do to learn these topics?

> When will you complete the actions listed above to learn these concepts?

Big Idea #2 Derivatives

1. Constructing a Tangent Line	?	?	?
2. Constructing a Normal Line	?	?	?
3. Definitions of Slope			
$\lim_{h \to 0} \frac{f(a+h)-f(a)}{h} \text{ and } \lim_{x \to a} \frac{f(x)-f(a)}{x-a}$	2	[]	[2]
4. Basic Derivative	?	?	?
5. Graphing the derivative from the original graph	2	?	2
6. Graphing the original function from the derivative graph	?	?	2
7. One-side Derivatives	?	?	?
8. Determining if a function is differentiable with limits	?	?	2
9. Derivative fails to exist knowing parent graphs *corner, cusp, etc.	?	[]	2

10. Differentiability implies continuity	?	?	?
11. Product Rule	?	?	?
12. Quotient Rule	?	?	?
13. Derivative of all 6 trig functions	?	?	?
14. Chain Rule	?	?	?
15. Derivative of Inverse Function	?	?	?
16. Implicit Differentiation	?	?	?
17. Derivatives of all 6 inverse trig functions	2	2	2
18. Derivative of exponential	?	?	?
19. Derivative of logarithmic	?	?	?

> What concepts are you struggling with?

> What can you do to learn these topics?

> When will you complete the actions listed above to learn these concepts?

Big Idea #3 Application of Derivatives			
1. Velocity	?	?	?
2 Acceleration	?	?	?
3. Speed	?	?	?
4. When a particle changes direction	?	?	?
5. Absolute Extrema	?	?	?
6. Local Extrema	?	?	?
7. Mean Value Theorem	?	?	?
8. Function Increasing or Decreasing	?	?	?
9. First Derivative Test	?	?	?
10. Concavity - concave up or down	?	?	?
11. Points of Inflection	?	?	?
12. Second Derivative Test	?	?	?
13. Optimization *Open Box *Area of a field and fencing	2	2	2
14. Linear Approximation *using a tangent line to approximate a function value	2	2	2
15. Related Rates *Similar Triangles (lamp post) *Sliding Ladder *Cone of water with a leak	[]	[]	[]
➤ What concepts are you struggling with?			

> What can you do to learn these topics?

> When will you complete the actions listed above to learn these concepts?

Big Idea #4 Integrals and Accumulation

1. RRAM and LRAM	?	?	?
2. MRAM	?	?	?
3. Trapezoidal Sum	?	?	?
4. Basic Antiderivatives	?	?	?
5. Integrating Discontinuous Functions	?	?	?
6. Indefinite Integrals $\rightarrow +C$?	?	2
7. Definite Integrals \rightarrow with bounds	?	?	?
8. Properties of Definite Integrals	?	?	?
9. Average Value	?	?	?
10. Fundamental Theorem Part 1 and 2	?	?	?
11. Solving a Separable Differential Equation	2	2	2
12. Slope Field	?	?	2

13. U-Substitution	?	?	?
14. Exponential Growth and Decay $*y = Ce^{kt}$?	?	2
15. Integral=Accumulation	?	?	?
What concepts are you struggling	with?		
 > What can you do to learn these topics? > When will you complete the actions listed above to learn these concepts? 			
Big Idea #5 Area and Volume			
1. Area Between Curves	?	?	?
2. Area Between Curves with Respect to the y	?	?	?
3. Volume - Cross Sections	?	?	?
4. Volume - Disks perpendicular to x-axis	?	?	?
5. Volume - Disks perpendicular to y-axis	?	?	?
6. Volume - Washers perpendicular to		_	

7. Volume - Washers perpendicular to y-axis	2	?	2
What concepts are you struggling was a struggling was	with?		
> What can you do to learn these topics?			
When will you complete the actions listed above to learn these concepts?			