

Syllabus

5.2: All

5.3: All except: The average value of a continuous function, Example 6, Example 7.

4.8: Definition of an Antiderivative, Example 1(a,b), Theorem 8, Definition of an Indefinite Integral, Example 6, Table 4.4 (1-7).

5.4: All except: Example 1, Example 2 (d), Example 3 (d,e), Integral of a rate, Example 4, Example 5, Example 7, Example 8.

5.5: All except: Example 5, Example 7(c), Example 8, Integrals of tangent, cotangent, secant and cosecant functions.

5.6: The part starting from "Area between curves" is **Not** included in this section.

7.1: All + The Following:

1) If $f(x) = \ln(x^2 - 6)$, then find $f'(x)$.

2) If $y = \ln(\sqrt{x+1})$, then find $\frac{dy}{dx}$.

3) Find $\int \tan x \, dx$, $\int \cot x \, dx$, $\int \sec x \, dx$, $\int \csc x \, dx$.

4) If $f(x) = \ln[\sqrt{6x-1} \cdot (4x+5)^3]$, then find $f'(x)$.

5) If $y = \frac{(5x-4)^3}{\sqrt{2x+1}}$, then use logarithmic differentiation to find $\frac{dy}{dx}$.

6) If $y = x^2 e^x$, then find $\frac{dy}{dx}$.

7) Find $\int_0^1 x e^{x^2} \, dx$.

8) Find $\int e^{x^3 + \ln x^2} \, dx$.

9) If $f(x) = (x^2 + 1)^\pi + \pi^{(x^2+1)}$, then find $f'(x)$.

10) Find $\int \frac{5^{\cos x}}{\csc x} \, dx$.

3.9: Table 3.1, Example 2, Example 3, Example 4.

8.1: All except 16,17,21,22 in Table 8.1, which will be given later.

7.3: All except Example 2.

8.2: All.

8.3: All.

8.4: All.

8.5: All.

4.5: From the start up to Example 8.

8.8: From the start up to Example 5.

5.6: Start from “Area Between Curves” to the end of the section.

6.1: Start from “Solids of Revolution: The Disk Method”. All examples are included except Example 6. Also, Example 8 is changed to: Find the volume of the solid generated by revolving the region between the parabola $x = 1 - y^2$ and $x = 0$ about the y -axis.

6.2: All. In Example 1 change the axis of rotation to the y -axis.

6.3: From the start up to Example 4.

6.4: All.

10.3: All

10.4: This section is replaced by section 13.3 in Calculus (the classic edition): Only Example 1, Example 2, Example 3, Example 4.

10.5: All.