삼각함수 단순 미적분 100문제

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$1. \int \csc x \cot x dx$ (C 생략)			$11(\sec x)'$		
\bigcirc cot x	$(2) - \tan x$	\bigcirc $-\sec x$	$ (1) \cos x \cot x $	\bigcirc sec $x \tan x$	$3 - \sec x \tan x$
$(4) - \sin x$	\bigcirc $-\csc x$		\bigcirc $-\cos x$	$\boxed{5} - \csc x \tan x$	_
$2. \int \sec x \tan x dx$ (C 생략)			12. $\int \sec^2 x dx$ (C 생략)		
\bigcirc $\tan x$	\bigcirc sec x	$\odot \cot x$	\bigcirc cot x	\bigcirc sec x	$\Im \sin x$
\bigcirc $-\cos x$	\bigcirc $-\csc x$		\bigcirc $\cos x$	\bigcirc $\tan x$	
$3(\sin x)'$			13. ∫ – csc² xdx (C 생략)		
\bigcirc $\tan x$	\bigcirc $-\sin^2 x$	$3 \sec^2 x$	\bigcirc csc x	\bigcirc $-\csc x$	$\Im \sin x$
$ (4) - \sec^2 x $	\bigcirc $-\cos x$		\bigcirc $\tan x$	\bigcirc $\cot x$	
$4(\csc x)'$			14. $-(\sin x)'$		
$ (1) \sec x \sin x $	\bigcirc $-\cos x$	\bigcirc $\csc x \cot x$	$ (1) \cos x \cot x $	$\bigcirc \cos^2 x$	\bigcirc $-\cos x$
$\bigcirc -\csc x \cos x$	\bigcirc $\tan x$		\bigcirc $\cot^2 x$	\bigcirc $-\csc x \cos x$	
5. $(\cot x)'$			$15. \int -\sec x \tan x dx$ (C 생략)		
\bigcirc $\cot^2 x$	\bigcirc $\tan x$	\odot $\cos^2 x$	\bigcirc $-\cot x$	$\bigcirc \cos x$	\bigcirc - $\sec x$
$(4) - \sin x$	$ (5) - \csc^2 x $		\bigcirc $-\csc x$	\bigcirc csc x	
6. $\int \sec^2 x dx$ (C 생략)			16. ∫ – $\sec^2 dx$ (C 생략)		
\bigcirc $-\sin x$	\bigcirc $\sin x$	\bigcirc csc x	\bigcirc $\sin x$	\bigcirc sec x	$\Im - \tan x$
\bigcirc $\cos x$	\bigcirc $\tan x$		\bigcirc - $\sec x$	$ (5) - \sin x $	
7. $\int \sin x dx$ (C 생략)			17. $(\sec x)'$		
\bigcirc cot x	\bigcirc $\sin x$	\bigcirc $-\csc x$	$ (1) - \csc x \tan x $	$\bigcirc -\sec^2 x$	$ (3) - \csc x \cot x $
$(4) - \sin x$	\bigcirc $-\cos x$		\bigcirc sec $x \tan x$	$ (5) \sec^2 x $	
8. $(\csc x)'$		$18. \int -\sec x \tan x dx$ (C 생략)			
\bigcirc $-\cos x$	$\bigcirc -\csc x \cos x$	$3 \cos^2 x$	\bigcirc - $\sec x$	\bigcirc sec x	\bigcirc csc x
$\bigcirc -\sin^2 x$	$ (5) - \csc x \cot x $		\bigcirc $-\cos x$	$ \sin x $	
9. ∫ − sin xdx (C 생략)			19. ∫ – csc² xdx (C 생략)		
\bigcirc $\cos x$	\bigcirc $-\tan x$	\bigcirc csc x	\bigcirc cot x	\bigcirc $-\cot x$	$\Im - \tan x$
\bigcirc $\sin x$	\bigcirc $-\sec x$		\bigcirc - $\sec x$	\bigcirc $\tan x$	
10. $-(\tan x)'$		$20. \int -\csc x \cot x dx$ (C 생략)			
$\bigcirc -\sin^2 x$	$\bigcirc -\csc x \tan x$	$\odot \cot^2 x$	\bigcirc sec x	\bigcirc $-\tan x$	$\Im \sin x$
\sim 2	\bigcirc 2				

4 $-\sec^2 x$

 \bigcirc $\csc^2 x$

 $(4) - \cos x$

 \bigcirc $\csc x$

21. $(\tan x)'$ 33. $(\cos x)'$ \bigcirc $-\sin^2 x$ \bigcirc sec $x \cot x$ \bigcirc $\cos^2 x$ \bigcirc $-\sec^2 x$ \bigcirc $-\csc^2 x$ \bigcirc sec² x \bigcirc sec² x(5) $-\sin x$ \bigcirc $-\sin x$ (5) $-\csc x \cos x$ $34. -(\cot x)'$ 22. $-(\cos x)'$ $\widehat{(3)} - \sin^2 x$ \bigcirc $-\sec^2 x$ \bigcirc $-\sin^2 x$ \bigcirc $-\csc^2 x$ \bigcirc sec $x \tan x$ (2) $\sin x$ \bigcirc $\csc^2 x$ (5) $\cos x$ $(4) - \sec x \tan x$ $(5) \sec x \sin x$ 35. $\int \csc x \cot x dx$ (C 생략) 23. $(\tan x)'$ (1) $-\csc x \tan x$ (2) $\sec^2 x$ \bigcirc $-\csc x \sin x$ \bigcirc $-\cot x$ (2) $-\sin x$ $(3) - \tan x$ $(4) - \sec x \tan x \quad (5) - \sec^2 x$ $(4) - \csc x$ $(5) - \sec x$ $36. -(\csc x)'$ 24. $(\sec x)'$ \bigcirc - sec $x \tan x$ \bigcirc sec² x \bigcirc $\cos^2 x$ $(3) - \sec^2 x$ \bigcirc $-\csc x \cot x$ (2) sec $x \sin x$ (5) $-\csc^2 x$ (5) sec $x \cot x$ \bigcirc sec $x \tan x$ 25. $-(\cos x)'$ 37. ∫ cos xdx (C 생략) \bigcirc $-\csc^2 x$ \bigcirc sec $x \cot x$ $(2) - \csc x \sin x$ \bigcirc $-\tan x$ (2) $\cot x$ \bigcirc csc x $\bigcirc 4$ $-\sec x \tan x \bigcirc 5$ $\sin x$ \bigcirc $\sin x$ (5) sec x26. $-(\sin x)'$ 38. ∫ cos xdx (C 생략) \bigcirc $-\csc x \sin x$ \bigcirc $-\csc^2 x$ \Im $\sin x$ \bigcirc $-\cos x$ (2) $\sin x$ $(3) - \sin x$ $(5) - \cos x$ \bigcirc sec x (5) $\cot x$ 27. ∫ csc² xdx (C 생략) 39. ∫ csc² xdx (C 생략) (1) $-\tan x$ (2) $\sin x$ \bigcirc $-\cot x$ \bigcirc tan x $(2) - \cot x$ \bigcirc $-\sec x$ \bigcirc cot x(5) $\cos x$ \bigcirc $-\cos x$ (5) sec x28. $(\cos x)'$ 40. ∫ - cos xdx (C 생략) (1) $-\csc x \tan x$ (2) $-\sin x$ $(3) - \sec x \tan x$ \bigcirc $-\tan x$ $(2) - \sec x$ $(3) - \sin x$ \bigcirc $-\cos x$ (5) $\sin x$ \bigcirc $\sin x$ $(5) - \csc x$ 29. ∫ - csc x cot xdx (C 생략) 41. ∫ − sin xdx (C 생략) \bigcirc - sec x (2) $-\tan x$ \Im $\sin x$ \bigcirc - sec x \bigcirc $-\cot x$ $(3) - \cos x$ \bigcirc $\tan x$ (5) csc x(5) sec x30. $\int \sec^2 x dx$ (C 생략) 42. ∫ - sin xdx (C 생략) \bigcirc sec x $(2) - \cot x$ \bigcirc $-\cos x$ \bigcirc $-\sin x$ \bigcirc $-\csc x$ \bigcirc $\cos x$ (4) $\tan x$ (5) $-\sin x$ \bigcirc cot x(5) $-\cos x$ 31. $-(\tan x)'$ 43. $(\cot x)'$ \bigcirc $-\sec^2 x$ \bigcirc csc² x \bigcirc $-\csc^2 x$ \bigcirc $-\csc x \tan x$ \bigcirc sec $x \cos x$ (2) $-\sin x$ $(4) - \csc x \cot x$ $(5) \csc x \cot x$ \bigcirc sec $x \tan x$ (5) $\cos^2 x$ 32. ∫ csc² xdx (C 생략) 44. ∫ cos xdx (C 생략)

(2) $\tan x$

(5) $\sin x$

 \bigcirc $-\csc x$

 \bigcirc $-\sin x$

 $(4) - \tan x$

2

 \bigcirc - sec x

 \bigcirc $\tan x$

 \bigcirc $-\sin x$

(5) $-\cot x$

 $\widehat{(3)}$ $\sin x$

45. ∫ sec² xdx (C 생략) 57. $(\cot x)'$ \bigcirc $\cos^2 x$ \bigcirc $-\sin^2 x$ \bigcirc $-\cot x$ (2) $\tan x$ \bigcirc sec x \bigcirc tan x \bigcirc $-\csc^2 x$ (5) $\sec^2 x$ \bigcirc $-\csc x$ (5) csc x58. $-(\sin x)'$ 46. $\int \sec x \tan x dx$ (C 생략) \bigcirc $-\sin x$ (2) sec $x \tan x$ \bigcirc $\cot^2 x$ \bigcirc sec x(2) csc x \Im $\sin x$ \bigcirc $-\cos x$ (5) $\cos x$ \bigcirc $-\csc x$ (5) $-\cot x$ 47. $(\sin x)'$ $59. \int \sec x \tan x dx$ (C 생략) \bigcirc cos x (2) $-\sin x$ (3) $\tan x$ \bigcirc csc $x \cot x$ \bigcirc $\cos x$ $(3) - \sec x \tan x$ (5) $-\sin^2 x$ (4) sec x(5) $\csc x$ \bigcirc sec $x \cos x$ $60. \int -\csc x \cot x dx$ (C 생략) 48. $-(\cos x)'$ \bigcirc $-\csc^2 x$ (3) $-\sin^2 x$ \bigcirc csc x $(2) - \csc x$ $(3) - \sin x$ \bigcirc sec $x \cot x$ \bigcirc $-\cos x$ \bigcirc $\cos^2 x$ (5) sec x(5) $\sin x$ 61. $\int -\sec^2 dx$ (C 생략) 49. $-(\sin x)'$ \bigcirc $-\sin x$ $(2) - \cos x$ \bigcirc sec $x \cot x$ (2) $-\csc x \tan x$ (3) $-\sec^2 x$ \bigcirc $-\csc x$ \bigcirc $\csc^2 x$ $(4) - \tan x$ (5) $\cos x$ (5) $-\cos x$ $62. \int -\sec x \tan x dx$ (C 생략) 50. ∫ sin xdx (C 생략) \bigcirc $\sin x$ \bigcirc cot x(3) $\tan x$ \bigcirc $-\csc x$ \bigcirc sec x(2) $\cos x$ $(4) - \sec x$ (5) $\cos x$ \bigcirc $-\cos x$ \bigcirc $-\sin x$ 63. $-(\cos x)'$ 51. $(\cos x)'$ \bigcirc $-\sin^2 x$ \bigcirc $\sin x$ (1) $\sec x \sin x$ \bigcirc $-\sin x$ \bigcirc $-\sec x \tan x$ \bigcirc sec $x \cot x$ \bigcirc $-\sec^2 x$ (5) $\cos^2 x$ $(4) - \sec^2 x$ (5) $\sec x \cos x$ 64. $(\tan x)'$ 52. $-(\csc x)'$ \bigcirc $-\csc^2 x$ (2) $-\sin^2 x$ \bigcirc $-\csc^2 x$ \bigcirc $-\csc x \tan x$ (2) $\csc x \cot x$ $(3) - \sec x \tan x$ \bigcirc $\csc^2 x$ (5) $\sec^2 x$ \bigcirc $-\sec^2 x$ (5) $-\csc x \cot x$ 65. $\int -\sec^2 dx$ (C 생략) 53. $(\cot x)'$ \bigcirc $-\sec x$ \bigcirc $-\csc^2 x$ (2) $-\tan x$ \bigcirc cot x(2) sec $x \tan x$ (3) $\tan x$ \bigcirc 4) $\cos x$ (5) $-\csc x \tan x$ \bigcirc $-\cos x$ (5) $\tan x$ 66. $-(\cot x)'$ 54. $-(\cot x)'$ (2) $\csc^2 x$ (1) $\csc x \cot x$ (2) sec $x \tan x$ (3) $\csc^2 x$ $(1) - \csc x \cos x$ \bigcirc sec $x \cot x$ \bigcirc $\cot^2 x$ (5) $\sec^2 x$ (5) $\cos x$ (4) sec $x \sin x$ 67. ∫ sec² xdx (C 생략) $55. \int \csc x \cot x dx$ (C 생략) \bigcirc tan x(2) $-\tan x$ $(2) - \tan x$ (3) $\sin x$ (1) $\tan x$ (3) $\cos x$

3

 \bigcirc $-\csc x$

 \bigcirc csc $x \cot x$

 $(4) - \csc^2 x$

56. $(\cos x)'$

 $(5) - \sin x$

(5) $\sin x$

(2) $-\csc x \cot x$ (3) $-\sin x$

 \bigcirc $-\cos x$

 \bigcirc $-\csc^2 x$

 \bigcirc $-\sin^2 x$

68. $(\cot x)'$

 \bigcirc cot x

(5) $\cos x$

 $(2) - \csc x \sin x \quad (3) \sec x \cot x$

69. $-(\cos x)'$ 81. $-(\cos x)'$ \bigcirc tan x \bigcirc cot² x (1) $-\sec x \tan x$ (2) $\csc x \cot x$ \Im $\sin x$ \bigcirc $\sin x$ (4) sec $x \cot x$ (5) $-\csc x \cot x$ $(4) - \csc x \cos x$ (5) sec $x \cot x$ 70. $(\cot x)'$ 82. $(\sec x)'$ \bigcirc $-\csc^2 x$ \bigcirc $-\sec^2 x$ (2) $\tan x$ (3) sec $x \cos x$ (2) $\cos x$ (3) sec $x \tan x$ \bigcirc $\cos^2 x$ \bigcirc $\cos^2 x$ (5) $\sec^2 x$ (5) $\sin x$ 71. $(\csc x)'$ 83. $(\csc x)'$ \bigcirc $\cos^2 x$ $(2) - \sec^2 x$ $(3) - \sin x$ \bigcirc sec $x \cos x$ (2) sec $x \sin x$ $(3) - \sin x$ (4) $-\csc x \cot x$ (5) $-\sec x \tan x$ \bigcirc $-\cos x$ (5) $-\csc x \cot x$ 72. $(\cos x)'$ 84. $-(\cos x)'$ \bigcirc $\cos^2 x$ (2) csc x cot x(3) $\sec^2 x$ \bigcirc $\sin x$ \bigcirc $\cos^2 x$ $(3) - \cos x$ (5) $-\sin^2 x$ (5) $-\sin^2 x$ \bigcirc $-\sin x$ 73. ∫ – sin xdx (C 생략) 85. $(\cos x)'$ \bigcirc $\cos x$ \bigcirc $-\sin x$ (2) $\csc^2 x$ (2) sec x(3) $\sin x$ \bigcirc $\csc x \cot x$ \bigcirc $-\cot x$ $(5) - \sec x$ \bigcirc sec $x \tan x$ (5) $\sec x \cos x$ 74. $-(\sin x)'$ 86. $(\sec x)'$ (1) $-\csc x \cot x$ (2) csc x cot x \bigcirc $-\cos x$ \bigcirc $\cos x$ (2) $\csc^2 x$ \bigcirc $-\csc x \sin x$ \bigcirc $\csc^2 x$ (5) $\cot^2 x$ (5) $\tan x$ (4) sec $x \tan x$ 87. ∫ sec² xdx (C 생략) 75. $\int \sec x \tan x dx$ (C 생략) (1) $\tan x$ (2) $\sin x$ $(3) - \tan x$ \bigcirc $-\cot x$ \bigcirc $-\sec x$ \bigcirc $\tan x$ \bigcirc $-\cot x$ (5) sec x(4) csc x(5) sec x76. ∫ sin xdx (C 생략) 88. ∫ sec² xdx (C 생략) \bigcirc $-\cos x$ (2) csc x(3) sec x \bigcirc $\tan x$ \bigcirc cos x \bigcirc $-\sin x$ $(4) - \tan x$ (5) $\sin x$ \bigcirc $-\csc x$ $(5) - \sec x$ 77. $(\cot x)'$ 89. $(\sin x)'$ \bigcirc $-\csc^2 x$ (2) $-\cos x$ (3) sec $x \cos x$ \bigcirc $-\sin x$ (2) $-\sec x \tan x$ (3) $-\sec^2 x$ \bigcirc $-\sec^2 x$ (5) $-\sin^2 x$ \bigcirc sec $x \tan x$ (5) $\cos x$ 90. $(\cot x)'$ 78. $(\sec x)'$ \bigcirc cos x \bigcirc sec $x \sin x$ (2) $-\csc x \sin x$ (3) $\sec^2 x$ (2) $\sin x$ \bigcirc sec $x \tan x$ (5) $-\csc^2 x$ \bigcirc $-\csc x \cos x$ $(5) - \cos x$

79. ∫ - csc² xdx (C 생략) 91. $-(\cot x)'$ \bigcirc csc² x \bigcirc $\cos^2 x$ (2) sec $x \cot x$ \bigcirc $\sin x$ $(2) - \csc x$ \bigcirc $\cos x$ \bigcirc sec $x \sin x$ (5) $-\csc x \tan x$ \bigcirc cot x(5) $\csc x$ 80. $(\csc x)'$ 92. ∫ - sin xdx (C 생략) \bigcirc $-\sin x$ $(2) - \sec x \tan x$ $(3) \sec x \cot x$ \bigcirc $-\csc x$ $\widehat{(2)} - \cos x$ \bigcirc $-\sec x$ $(4) - \csc x \cot x$ (5) $-\csc x \cos x$ (5) $\csc x$

- 93. ∫ cos xdx (C 생략)
 - \bigcirc $-\tan x$
- \bigcirc $\tan x$
- \Im $-\sin x$

 \bigcirc cot² x

- \bigcirc $\cos x$
- \bigcirc $-\cos x$
- 94. $-(\sin x)'$
 - \bigcirc sec $x \tan x$
- ② $\csc x \cot x$
- $\textcircled{4}\ \sec x\cot x$
- (5) $-\cos x$
- 95. $(\csc x)'$
 - \bigcirc $-\sin x$
- (2) $-\csc x \cot x$ (3) $\sec^2 x$
- \bigcirc $\cos x$
- \bigcirc $-\csc^2 x$
- 96. $-(\cot x)'$
 - \bigcirc csc² x
- $(2) \csc x \cot x \quad (3) \csc x \cos x$
- \bigcirc $\sec x \tan x$
- (5) $\sec x \tan x$
- 97. $(\cot x)'$
 - \bigcirc $-\sin^2 x$
- (2) $-\csc x \sin x$ (3) $\csc x \cot x$
- $(4) \csc x \tan x \quad (5) \csc^2 x$
- 98. $\int \csc x \cot x dx$ (C 생략)
 - \bigcirc $-\csc x$
- \bigcirc $\tan x$
- \bigcirc csc x

- \bigcirc $-\cot x$
- \bigcirc $\cos x$
- 99. $(\csc x)'$
 - \bigcirc sec $x \cos x$
- \bigcirc $-\csc x \cot x$
- \bigcirc $-\sec^2 x$
- \bigcirc $-\csc x \tan x$
- 100. ∫ sin xdx (C 생략)
 - \bigcirc $-\tan x$
- \bigcirc $-\cos x$
- \bigcirc $\sin x$

 \bigcirc cos x

- \bigcirc csc x
- \bigcirc $-\sec x$

정답

- 1. ④ ① ④ ② ④ 6. ④ ④ ④ ① ③
- 11. ② ④ ④ ② ② 16. ② ③ ① ① ④ 21. ③ ① ① ③ ④
- 26. 4 2 1 4 3

- 61. (3) (3) (0) (4) (1) (66. (1) (0) (0) (2) (0) (71. (3) (3) (0) (2) (4) (76. (0) (0) (2) (3) (3) (81. (1) (2) (4) (0) (0) (86. (3) (2) (2) (4) (4) (91. (0) (3) (2) (4) (1) (1) (96. (0) (4) (0) (1) (1)