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INTEGRATION MIX

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1. $\int 6(4x+3)^{\frac{1}{2}} dx$

2. $\int \frac{12}{\sqrt{3x+1}} dx$

3. $\int \frac{12x}{\sqrt{4x-1}} dx$

4. $\int \frac{12}{4x+1} dx$

5. $\int \frac{12x}{4x+1} dx$

6. $\int (\sin x + \cos x)^2 dx$

7. $\int (2\sin x + \operatorname{cosec} x)^2 dx$

8. $\int \frac{5}{(3x-1)(2x+1)} dx$

9. $\int 4x \sin 2x dx$

10. $\int \frac{7}{4x} dx$

11. $\int \left(x + \frac{2}{x}\right)^2 dx$

12. $\int \frac{10}{(1-4x)^{\frac{7}{2}}} dx$

13. $\int (1+2\cos x) \sin x dx$

14. $\int 2\cos^2 x - \cos\left(\frac{1}{2}x\right) dx$

15. $\int \frac{14x}{x^2-4} dx$

16. $\int \frac{9}{2x^2+x-1} dx$

17. $\int (8x+1)e^{-2x} dx$

18. $\int (e^{2x} + e^{-x})^2 dx$

19. $\int \frac{6}{(3x+2)^3} dx$

20. $\int \frac{6x}{(3x+2)^3} dx$

21. $\int (\sin x - 2\cos x) \sin x dx$

22. $\int \frac{(2+\cos x) \sin 2x}{2\cos x} dx =$

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23. $\int \frac{8x-3}{4x} dx$

24. $\int \frac{6x^2}{x^3+8} dx$

25. $\int (1+2\cos x)^3 \sin x dx$

26. $\int \cos \sqrt{x} dx$

27. $\int \frac{3}{2x-1} dx$

28. $\int \frac{10}{(2x+1)^6} dx$

29. $\int \frac{3x-1}{(2x+1)(x-2)} dx$

30. $\int (2+\sin x)^2 dx$

31. $\int 5(2x-3)^{\frac{1}{4}} dx$

32. $\int \frac{e^{4x}+3}{e^{3x}} dx$

33. $\int x e^{5x} dx$

34. $\int \frac{x^3}{x^4+2} dx$

35. $\int \frac{2}{(x-2)(x-4)} dx$

36. $\int \frac{3}{4x+1} dx$

37. $\int \left(1+\frac{1}{x}\right)^2 dx$

38. $\int \frac{x}{(x^2-1)^3} dx$

39. $\int \cos x - \sin x dx$

40. $\int \sin x - \cos x dx$

41. $\int \sin(4x+3) dx$

42. $\int \frac{x}{\sqrt{x+1}} dx$

43. $\int \cos(5-2x) dx$

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44. $\int 3\sin 2x \, dx$

45. $\int (1 + \sec^2 x) \sin x \, dx$

46. $\int (1 - 2\cos x)^2 \, dx$

47. $\int (1 + \cot^2 x) \sec^2 x \, dx$

48. $\int 2x \cos 3x \, dx$

49. $\int \frac{3}{(2+x)(1-x)} \, dx$

50. $\int 10(3x+1)^4 \, dx$

51. $\int 6(2x+1)^{\frac{1}{2}} \, dx$

52. $\int \frac{1}{\cos^2 x \tan^2 x} \, dx$

53. $\int \cos x \sin x \, dx$

54. $\int \frac{2}{\cos^2 x} \, dx$

55. $\int 2 + 2 \tan^2 x \, dx$

56. $\int \frac{1 + \cos x}{\sin^2 x} \, dx$

57. $\int \frac{(1 + \cos x)^2}{\sin^2 x} \, dx$

58. $\int x \sin 3x \, dx$

59. $\int \frac{2x}{(2x+1)^3} \, dx$

60. $\int (4-5x)^{-1} \, dx$

61. $\int \frac{1}{4x} \, dx$

62. $\int \frac{1}{(x+1)(x+2)} \, dx$

63. $\int \frac{x+1}{x} \, dx$

64. $\int \frac{x}{x+1} \, dx$

65. $\int \frac{4x}{\sqrt{1-2x^2}} \, dx$

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66. $\int \frac{x+1}{9x^2-1} dx$

67. $\int x \sin 4x dx$

68. $\int \ln x dx$

69. $\int \frac{4}{(2x-7)^2} dx$

70. $\int 4 \cos^2 x dx$

71. $\int (1 + \tan^2 x) \sec^2 x dx$

72. $\int (1 + \tan x) \sec^2 x dx$

73. $\int \operatorname{cosec}^2(3x+1) dx$

74. $\int 12 \sec^2(2x+3) dx$

75. $\int \frac{\sin \sqrt{x}}{\sqrt{x}} dx$

76. $\int 6e^{2x+2} dx$

77. $\int (1 - \cot^2 x) \sec^2 x dx$

78. $\int \frac{\sin x - \cos x}{\sin x + \cos x} dx$

79. $\int \sec x \tan x \sqrt{1 + \sec x} dx$

80. $\int \tan 2x \sec 2x dx$

81. $\int x^2 \ln x dx$

82. $\int \frac{6}{x^2 - 2x - 8} dx$

83. $\int 3 \cot^2 x dx$

84. $\int \cos 2x \sin x dx$

85. $\int \frac{\sqrt{x^2+4}}{x} dx$

86. $\int 7(2x-3)^{\frac{5}{2}} dx$

87. $\int \frac{x^2}{4-x^3} dx$

88. $\int x \sin\left(\frac{1}{2}x\right) dx$

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89. $\int \frac{4}{4x^2 + 4x + 1} dx$

90. $\int \frac{3}{\sqrt{4x+1}} dx$

91. $\int \frac{x}{\sqrt{x-1}} dx$

92. $\int \frac{1}{3(x-2)^{\frac{1}{2}}} dx$

93. $\int \frac{6x+3}{2x} dx$

94. $\int \frac{4x+1}{2x-5} dx$

95. $\int \frac{4x}{x^2-1} dx$

96. $\int \frac{x^2}{2x-1} dx$

97. $\int \frac{1+\cos^4 x}{\cos^2 x} dx$

98. $\int \frac{17-5x}{(2x+3)(2-x)^2} dx$

99. $\int x \sin(2x-1) dx$

100. $\int 4(3x-2)^3 dx$

101. $\int \sqrt{x}\sqrt{x} dx$

102. $\int \frac{1}{x^2 \sqrt[3]{x^2}} dx$

103. $\int \frac{3}{\sqrt{2-4x}} dx$

104. $\int \frac{1}{1+\cos 2x} dx$

105. $\int \frac{2}{2x-x^2} dx$

106. $\int \frac{\ln x}{x^2} dx$

107. $\int \frac{3x^2}{x^3+1} dx$

108. $\int \frac{2x+1}{2x-1} dx$

109. $\int \frac{14x+1}{(1-x)(2x+1)} dx$

110. $\int \frac{6x}{\sqrt{2x+3}} dx$

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111. $\int \frac{\sin^4 x + \cos^2 x}{\sin^2 x} dx$

112. $\int \frac{2}{(x-4)\sqrt{x}} dx$

113. $\int \frac{1}{2+\sqrt{x-1}} dx$

114. $\int \frac{4}{\sqrt{6x-1}} dx$

115. $\int \frac{3e^{2x}}{e^{2x}-1} dx$

116. $\int x \sec^2 x dx$

117. $\int \operatorname{cosec} 2x \cot 2x dx$

118. $\int \tan^2 x \sec^2 x dx$

119. $\int \sin 2x \operatorname{cosec} x dx$

120. $\int (2 \cos x - 3 \sin x)^2 dx$

121. $\int \frac{\sin x + \tan x}{\cos x} dx$

122. $\int \frac{1 + \sin x}{\cos^2 x} dx$

123. $\int e^{\sin x} \cos x dx$

124. $\int x^2 \sin x dx$

125. $\int (2x+1)^3 dx$

126. $\int \frac{\tan^4 x}{\cos^2 x} dx$

127. $\int \frac{4x^2 - 6x + 5}{(2-x)(2x-1)^2} dx$

128. $\int \frac{3x-1}{2x+3} dx$

129. $\int \frac{8x^2}{1-2x} dx$

130. $\int \frac{10}{(3x+1)^{\frac{3}{2}}} dx$

131. $\int 5^x dx$

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132. $\int \sqrt{\sin x \cos^2 x} \, dx$

133. $\int (2x+1)\sin(x^2+x+1) \, dx$

134. $\int (2x+1)(x^2+x+1) \, dx$

135. $\int (x+1)\cos(x^2+2x+1) \, dx$

136. $\int \frac{1}{2+\sqrt{x}} \, dx$

137. $\int \frac{1}{e^x + e^{-x} + 2} \, dx$

138. $\int x^2 \tan(x^3+1) \, dx$

139. $\int x^3 \ln(x^2+1) \, dx$

140. $\int \sin^2 x \sec^2 x \, dx$

141. $\int 3\sec^2 x \sin x \, dx$

142. $\int \frac{1}{x(1+\ln x)^3} \, dx$

143. $\int x^3 \ln x \, dx$

144. $\int x \ln(2x^3) \, dx$

145. $\int 4 - \cos^4 x \sin x \, dx$

146. $\int \frac{\cos x}{\sin^3 x} \, dx$

147. $\int \frac{4\sec^2 x}{\tan x} \, dx$

148. $\int \sec^2 x \tan x \sqrt{1+\tan x} \, dx$

149. $\int \frac{\sqrt{1+2\tan x}}{\cos^2 x} \, dx$

150. $\int \tan^2 x \, dx$

151. $\int \frac{(1+\sin x)^2}{\cos^2 x} \, dx$

152. $\int \frac{\cos^2 x}{1+\sin x} \, dx$

153. $\int \frac{1}{1+\cos x} \, dx$

154. $\int \frac{\cos x}{\sqrt{\sin x}} \, dx$

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155. $\int \frac{10x^4}{2x^{\frac{5}{2}} + 1} dx$

156. $\int \sin \sqrt{x} dx$

157. $\int \frac{x^2}{1-2x} dx$

158. $\int \frac{12}{(1-2x)^5} dx$

159. $\int \frac{x^4 + 2x}{x^5 + 5x^2 + 8} dx$

160. $\int \frac{x}{x-1} dx$

161. $\int \frac{1}{(1+\sqrt{x})\sqrt{x}} dx$

162. $\int \frac{2x^3 + 1}{x^4 + 2x} dx$

163. $\int \frac{x+2}{x(x+1)} dx$

164. $\int \sin x \ln(\sec x) dx$

165. $\int \frac{(1+2\cos x)^2}{3\sin^2 x} dx$

166. $\int \frac{1}{x \ln x} dx$

167. $\int (2-3x)^{-2} dx$

168. $\int 2\sec^2 x + \frac{1}{2}\sin 2x dx$

169. $\int \frac{\ln x}{\sqrt{x}} dx$

170. $\int \frac{\cos^4 x}{\sin x} dx$

171. $\int 6\tan^2 x - \sec^2 x dx$

172. $\int 6\cos^4 x - 2\sin^2 x dx$

173. $\int \sin 4x \cos 4x dx$

174. $\int \frac{1}{\operatorname{cosec} x - \cot x} dx$

175. $\int \frac{x^2}{\sqrt{x-1}} dx$

176. $\int \frac{3e^{2x}}{\sqrt{e^x - 1}} dx$

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$$177. \int \frac{1}{(2+\sqrt[3]{x})\sqrt[3]{x^2}} dx$$

$$178. \int \frac{4x^7}{x^4+1} dx$$

$$179. \int \frac{x}{9x^2+1} dx$$

$$180. \int \frac{2}{x+\sqrt[3]{x}} dx$$

$$181. \int \frac{3x}{1+\sqrt{x}} dx$$

$$182. \int \frac{3x^2+2}{4x+1} dx$$

$$183. \int \frac{3}{x} + \frac{4}{x^2} - \frac{2}{x^3} dx$$

$$184. \int 2\sin 2x \cos^2 x dx$$

$$185. \int \frac{10x^2-23x+11}{(2-3x)(2x-1)^2} dx$$

$$186. \int \frac{\sec x}{\sec x - \tan x} dx$$

$$187. \int x \cos 6x dx$$

$$188. \int \sin x \sin 3x dx$$

$$189. \int 4\cos 3x + \frac{1}{2}\sin 3x dx$$

$$190. \int \sin^2 6x dx$$

$$191. \int \frac{\cos 2x}{1-\cos^2 2x} dx$$

$$192. \int \frac{1}{\cos^2 x \tan^2 x} dx$$

$$193. \int 3\cos^3 3x dx$$

$$194. \int 3\sec^4 x dx$$

$$195. \int 2\sin x \cos 3x dx$$

$$196. \int \frac{2\sin x}{\cos x + \sin x} dx$$

$$197. \int \frac{4}{2x-1} + \frac{1}{3-4x} dx$$

$$198. \int x^2 \sin 3x dx$$

$$199. \int \operatorname{cosec}^2 2x dx$$

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200. $\int \sin^3 2x \cos 2x \, dx$

201. $\int \cot^2 3x \, dx$

202. $\int \frac{7}{3x} \, dx$

203. $\int \frac{\sin x \cos x}{\sqrt{1 - \cos 2x}} \, dx$

204. $\int \frac{\sin x \cos x}{1 + \cos 2x} \, dx$

205. $\int 4(3 - 2x)^5 \, dx$

206. $\int \frac{1 + \sin x}{\cos x} \, dx$

207. $\int \sin 2x \sec x \, dx$

208. $\int \sin 2x \sin x \, dx$

209. $\int x \cos^2 x \, dx$

210. $\int \sin(x+1)^{\frac{1}{3}} \, dx$

211. $\int \frac{1 - \ln x}{x^2} \, dx$

212. $\int 4xe^{-\frac{2}{3}x} \, dx$

213. $\int (e^x + x)^2 \, dx$

214. $\int \frac{e^{4x} - e^{-x}}{e^{2x}} \, dx$

215. $\int \frac{e^{\ln x}}{x} \, dx$

216. $\int \frac{1}{2(3x+1)^4} \, dx$

217. $\int \frac{\cos(\ln x)}{x} \, dx$

218. $\int \frac{4xe^{2x^2}}{\sqrt{1+2e^{2x^2}}} \, dx$

219. $\int \frac{4}{3(2x+1)} \, dx$

220. $\int \frac{1}{\cos^2 x \tan x} \, dx$

221. $\int \frac{\sin 2x}{1 + \cos x} \, dx$

222. $\int \sin^3 x \, dx$

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223. $\int \frac{1}{3} \sin 2x - \frac{1}{2} \cos 3x \, dx$

224. $\int \frac{3x}{\sqrt{4-2x^2}} \, dx$

225. $\int \frac{1}{\sin x \cos^2 x} \, dx$

226. $\int \frac{3x}{4-2x^2} \, dx$

227. $\int \frac{1-4x}{x(4x-\ln x)^{\frac{3}{2}}} \, dx$

228. $\int \frac{\sin x}{\cos^4 x} \, dx$

229. $\int \frac{\operatorname{cosec}^2 x}{1+\cot x} \, dx$

230. $\int x^2 \cos\left(\frac{1}{4}x\right) \, dx$

231. $\int \frac{3}{(\sqrt{x}-2)(\sqrt{x}+1)} \, dx$

232. $\int \frac{1}{(\sqrt{x}-2)(\sqrt{x}+2)} \, dx$

233. $\int \frac{4-3x}{2x+1} \, dx$

234. $\int \left(1+\frac{1}{x}\right)\sqrt{x} \, dx$

235. $\int \frac{\sec x}{\cos x - \sin x} \, dx$

236. $\int \frac{x^2-2}{x^2-1} \, dx$

237. $\int \frac{1}{x^3-x^2} \, dx$

238. $\int \frac{6x^2}{2x^{\frac{3}{2}}-1} \, dx$

239. $\int \frac{1}{1+\sqrt{x-1}} \, dx$

240. $\int \frac{x+1}{x-5} \, dx$

241. $\int \frac{(x+2)^2}{3x} \, dx$

242. $\int 4e^{-2x} - \frac{1}{3} \sin 3x \, dx$

243. $\int 2x \sec^2 2x \, dx$

244. $\int \cos x \sin^8 x \, dx$

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245. $\int \frac{\sin^5 x}{\cos^7 x} dx$

246. $\int \tan 3x dx$

247. $\int \frac{1}{\sec x - 1} dx$

248. $\int \frac{\sin^2 x}{\cos^4 x} dx$

249. $\int \frac{\sin x \cos x}{1 - \cos x} dx$

250. $\int \frac{(4x-1)^{-1}}{4} dx$

251. $\int \frac{e^{2x} - 2e^x}{e^x + 1} dx$

252. $\int \frac{2x^2 - 3x + 2}{x-1} dx$

253. $\int \frac{1}{1 - \cot^2 x} dx$

254. $\int \frac{x^2 + 1}{x^4 - x^2} dx$

255. $\int \operatorname{cosec}^4 x dx$

256. $\int x^2 e^{\frac{1}{2}x} dx$

257. $\int (e^x + 2e^{-x})^2 dx$

258. $\int e^x \sin(e^x) dx$

259. $\int xe^2 dx$

260. $\int (2\cos x - 3)^2 dx$

261. $\int \frac{x^2}{x-2} dx$

262. $\int \frac{(x+1)e^{\frac{1}{x}}}{x^3} dx$

263. $\int \frac{\sqrt{4x+1}}{x} dx$

264. $\int \frac{1}{(1-x^2)^{\frac{3}{2}}} dx$

265. $\int \frac{2^x}{2^x + 1} dx$

266. $\int (2x-1)\sqrt{2x-3} dx$

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$$267. \int \frac{9x^5}{\sqrt{x^3+1}} dx$$

$$268. \int (3\sin x - \cos x)^2 dx$$

$$269. \int \frac{4x}{x^2-10} dx$$

$$270. \int \frac{4e^{3x}}{1-e^{3x}} dx$$

$$271. \int (1-\cos x)\sin x \cos x dx$$

$$272. \int (\tan x - 1)^2 dx$$

$$273. \int \frac{1+e^x}{1-e^x} dx$$

$$274. \int \sin 2x \cos^4 2x dx$$

$$275. \int \frac{1}{\sin x \cos x} dx$$

$$276. \int \frac{1}{\sin^2 x \cos x} dx$$

$$277. \int \frac{1}{1-\sin x} dx$$

$$278. \int \frac{1}{e^x+1} dx$$

$$279. \int (1+\sin x)\sin 2x dx$$

$$280. \int x \sec x \tan x dx$$

$$281. \int \sin 3x \cos 2x dx$$

$$282. \int \frac{1-2x}{x(2x-\ln x)^2} dx$$

$$283. \int x^2 e^{-\frac{1}{4}x} dx$$

$$284. \int \frac{x+4}{x-4} dx$$

$$285. \int 3x^2(4-2x^3)^{\frac{3}{2}} dx$$

$$286. \int x\sqrt{x+1} dx$$

$$287. \int \frac{x+1}{\sqrt[3]{x^2+2x+3}} dx$$

$$288. \int \sin 2x \cos x dx$$

$$289. \int \sin 2x \cos 2x dx$$

$$290. \int \frac{3^x}{3^x+1} dx$$

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291. $\int \frac{\tan x}{\tan x - \sec x} dx$

292. $\int \frac{(\ln x)^2}{x} dx$

293. $\int \frac{8(x^2+1)}{(x-3)(x+1)^2} dx$

294. $\int \sqrt[3]{x} \sqrt{\frac{1}{x}} dx$

295. $\int (x+1)(x^2+2x-1)^4 dx$

296. $\int \sin x \cos^4 x dx$

297. $\int \frac{2x+6}{x^2+6x+1} dx$

298. $\int \frac{1}{x(x-4)} dx$

299. $\int \frac{\tan x}{\sqrt{1+\cos 2x}} dx$

300. $\int \cos^2 x \sin^2 x dx$

301. $\int \frac{3x^3+5x}{x^2+1} dx$

302. $\int \sin^2 2x dx$

303. $\int \frac{\cos 2x}{\cos^2 x} dx$

304. $\int \sec^3 x \tan x dx$

305. $\int x[(\ln x)^2 - 1] dx$

306. $\int \frac{x^2}{x^3+5} dx$

307. $\int \frac{2x+1}{3x-1} dx$

308. $\int x(3+x^2)^4 dx$

309. $\int \frac{9}{x^2 \sqrt{9-x^2}} dx$

310. $\int \frac{\cos x}{\sqrt{\sin^3 x}} dx$

311. $\int \frac{x-3}{\sqrt{x+1}-2} dx$

312. $\int \frac{x-4}{x^2-4} dx$

313. $\int \frac{2 \sin x}{\cos x + \sin x} dx$

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314. $\int (1-x^{-2})^2 dx$

315. $\int \frac{\sqrt{\tan x}}{\cos^2 x} dx$

316. $\int (3\sin x + \cos x)^2 dx$

317. $\int \frac{\sec^2 x}{(1+\tan x)^3} dx$

318. $\int \frac{1}{\cos^2 x \sin^2 x} dx$

319. $\int \cot 2x dx$

320. $\int 2^x dx$

321. $\int \frac{\sin x + \sin x \cos x}{1 - \cos x} dx$

322. $\int \frac{1}{\cos^4 x} dx$

323. $\int \frac{\sin x \cos x}{\sqrt{1 + \cos 2x}} dx$

324. $\int \frac{\ln x^2}{x} dx$

325. $\int \sin x \cos^2\left(\frac{1}{2}x\right) dx$

326. $\int \frac{e^{3x} + 1}{e^x + 1} dx$

327. $\int \frac{\sqrt{x}}{x-1} dx$

328. $\int 2^x 3^x dx$

329. $\int 3^{2x+1} dx$

330. $\int \frac{2x^{\frac{3}{2}} + 1}{x^{\frac{5}{2}} + 2x} dx$

331. $\int \frac{1}{x(1+\sqrt{x})} dx$

332. $\int \frac{\sqrt{x}}{\sqrt{x}-1} dx$

333. $\int \frac{1}{x(1+x^2)} dx$

334. $\int \sin^4 x \sin 2x dx$

335. $\int (\tan x + \cot x)^2 dx$

336. $\int \frac{x^2 + 2x - 2}{x^2 - 2x + 2} dx$

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337. $\int x \sin x \cos x \, dx$

338. $\int \sec x \tan^3 x \, dx$

339. $\int \frac{1}{\operatorname{cosec} x - \cot x} \, dx$

340. $\int \frac{2x^{\frac{1}{4}} + 1}{4x^{\frac{5}{4}} + 4x} \, dx$

341. $\int \frac{\ln(x-1)}{\sqrt{x}} \, dx$

342. $\int e^{x+e^x} \, dx$

343. $\int \frac{1}{x(1+\sqrt{x})^2} \, dx$

344. $\int x^2 e^{-x} \, dx$

345. $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} \, dx$

346. $\int \sqrt{x} e^{\sqrt{x}} \, dx$

347. $\int \frac{4x^2 - x + 1}{(x-1)(2x-1)} \, dx$

348. $\int e^x \cos x \, dx$

349. $\int \frac{5^{2x}}{5^{2x} + 3} \, dx$

350. $\int \frac{3x^5}{x^3 - 1} \, dx$

351. $\int \frac{x-2}{x^2 - 4x - 2} \, dx$

352. $\int \frac{1}{(x-1)\sqrt{x^2-1}} \, dx$

353. $\int \frac{3x^3 - x^2 + 10x - 3}{x^2 + 3} \, dx$

354. $\int \frac{4}{(4+x^2)^{\frac{3}{2}}} \, dx$

355. $\int \frac{(x+1)^2}{x^2 + 1} \, dx$

356. $\int \frac{\cos x + \tan x}{1 + \tan^2 x} \, dx$

357. $\int \frac{\sqrt{1+\sqrt{x}}}{\sqrt{x}} \, dx$

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$$358. \int \frac{4x^3 \sqrt{x^4+1}}{1+\sqrt{x^4+1}} dx$$

$$359. \int (\ln x)^2 dx$$

$$360. \int \sqrt{18 \cos x \sin 2x} dx$$

$$361. \int \frac{1}{\sqrt{x^5+x^2}} dx$$

$$362. \int \sqrt{\sin^2 x + (\cos x - 1)^2} dx$$

$$363. \int x(\sin x + \cos x) dx$$

$$364. \int \left(\frac{1}{x^2} + \frac{1}{x^3} \right) e^{\frac{1}{x}} dx$$

$$365. \int \frac{\sec^4 x}{\sqrt{\tan x}} dx$$

$$366. \int \frac{\cos x}{(\cos x + \sin x)^3} dx$$

$$367. \int \frac{20x}{4-x^2} dx$$

$$368. \int \frac{\sqrt{x}}{1+\sqrt{x}} dx$$

$$369. \int x(\sec^2 x - \operatorname{cosec}^2 x) dx$$

$$370. \int \frac{4x^2+4x}{\sqrt{2x+1}} dx$$

$$371. \int x \tan^2 x dx$$

$$372. \int x \cos^2 3x dx$$

$$373. \int \cos x (6 \sin x - 2 \sin 3x)^{\frac{2}{3}} dx$$

$$374. \int \sqrt{x^2 - x^4} dx$$

$$375. \int \frac{x+3}{\sqrt[3]{x^2+6x}} dx$$

$$376. \int \frac{1-x}{1-\sqrt{x}} dx$$

$$377. \int \frac{1}{\operatorname{cosec} 2x - \cot 2x} dx$$

$$378. \int \sec^3 x \tan^5 x dx$$