

## Five hundred polynomial factoring problems

1.  $x^2 - 14x + 45$

2.  $3x^2 + 23x + 14$

3.  $2x^3 - 2x^2 - 9x + 9$

4.  $3x^2 - 12x + 9$

5.  $2x^2 + 24x + 54$

6.  $3x^2 - 3$

7.  $2x^2 + 17x + 21$

8.  $8x^2 - 20x + 8$

9.  $36x^2 - 12x - 35$

10.  $5x^2 + 23x - 42$

11.  $x^2 + 6x - 16$

12.  $4x^2 - 18x + 14$

13.  $4x^2 + 38x + 18$

14.  $3x^2 - 15x + 12$

15.  $10x^2 - 23x - 5$

16.  $6x^2 - 45x + 54$

17.  $4x^2 - 25x + 25$

18.  $x^3 - 2x^2 - 2x + 4$

19.  $15x^2 + 33x + 18$

20.  $x^3 + x^2 - x - 1$

21.  $8x^2 - 14x - 72$

22.  $12x^2 - 16x - 28$

23.  $12x^3 - 6x^2 + 18x - 9$

24.  $6x^3 + 27x^2 + 18x + 81$

25.  $2x^2 + 26x + 72$

26.  $x^2 + 7x - 18$

27.  $8x^2 + 10x - 63$

28.  $4x^2 - 4$

29.  $6x^2 - 3x - 3$

30.  $2x^2 + 9x - 5$

31.  $4x^2 - 21x - 49$

32.  $x^2 - 2x - 48$

33.  $x^2 - 14x + 48$

34.  $x^2 - 2x - 63$

35.  $2x^2 - 10x - 72$

36.  $4x^2 - 44x + 72$

37.  $3x^3 + 6x^2 + 6x + 12$

38.  $2x^2 - 5x - 3$

39.  $2x^2 - 4x - 30$

40.  $4x^2 - 20x + 16$

41.  $x^2 - 8x + 12$

42.  $12x^3 + 27x^2 - 4x - 9$

43.  $6x^2 - 5x - 21$

44.  $8x^2 - 16x - 10$

45.  $x^2 - 2x - 48$

46.  $12x^2 + 46x - 8$

47.  $4x^2 + 33x + 54$

48.  $x^2 + 4x - 5$

49.  $3x^2 + 19x + 6$

50.  $2x^2 - 22x + 36$

51.  $4x^2 + 26x + 42$

52.  $x^2 + 4x - 45$

53.  $20x^2 + 60x + 40$

54.  $12x^3 + 6x^2 - 6x - 3$

55.  $3x^2 - 24x - 27$

56.  $4x^3 - 3x^2 - 28x + 21$

57.  $x^2 + 4x + 3$

58.  $x^3 - 2x^2 - x + 2$

59.  $4x^2 - 21x + 20$

60.  $x^3 - 4x^2 - 5x + 20$

61.  $x^3 + 4x^2 + 6x + 24$

62.  $10x^2 - 35x + 25$

63.  $3x^2 + 14x + 16$

64.  $4x^3 + 7x^2 - 16x - 28$

65.  $3x^3 + 21x^2 - 7x - 49$

66.  $6x^2 - 60x + 54$

67.  $18x^3 - 18x^2 - 12x + 12$

68.  $12x^2 + 14x + 4$

69.  $3x^2 - 30x + 63$

70.  $12x^2 + 14x + 4$

71.  $16x^2 + 8x - 63$

72.  $12x^2 - 28x + 16$

73.  $4x^2 + 21x - 18$

74.  $2x^2 - 9x + 9$

75.  $2x^3 + 6x^2 - 5x - 15$

76.  $2x^2 - 3x - 35$

77.  $30x^2 - 29x - 45$

78.  $x^2 - 5x - 14$

79.  $2x^2 + 9x + 4$

80.  $x^2 + 6x + 5$

81.  $x^2 - 11x + 24$

82.  $x^2 + 2x - 24$

83.  $15x^2 + 14x - 8$

84.  $2x^2 + 18x + 40$

85.  $2x^2 + 6x - 8$

86.  $2x^2 + 13x + 6$

87.  $6x^2 + 19x + 15$

88.  $4x^2 - 20x - 24$

89.  $2x^2 - 11x + 9$

90.  $3x^2 + 25x - 18$

91.  $x^3 + 6x^2 + 2x + 12$

92.  $2x^3 - 4x^2 - 3x + 6$

93.  $2x^2 + 7x + 3$

94.  $x^2 - 2x - 63$

95.  $x^2 + 3x - 54$



96.  $12x^2 - 6x - 6$

97.  $25x^2 + 5x - 12$

98.  $5x^2 + x - 18$

99.  $8x^3 + 12x^2 + 2x + 3$

100.  $x^2 - 7x - 18$

101.  $6x^2 + 25x + 25$

102.  $2x^3 - 5x^2 - 2x + 5$

103.  $3x^2 - x - 4$

104.  $20x^2 - 13x - 21$

105.  $4x^2 - 34x - 18$

106.  $4x^2 - 24x + 32$

107.  $6x^2 - 39x + 45$

108.  $16x^2 - 36x + 18$

109.  $3x^2 + 19x + 6$

110.  $x^3 + 4x^2 + 8x + 32$

111.  $x^3 + x^2 - 4x - 4$

112.  $3x^2 + 24x + 36$

113.  $2x^2 - 8x - 42$

114.  $3x^2 - 2x - 21$

115.  $4x^2 - 18x - 36$

116.  $x^2 - 5x - 24$

117.  $12x^2 + 50x - 18$

118.  $x^2 - 10x + 24$

119.  $4x^2 + 25x + 6$

120.  $x^2 + 6x + 5$

121.  $4x^2 - 40x + 36$

122.  $12x^2 + 23x - 24$

123.  $2x^3 - 8x^2 - 12x + 48$

124.  $2x^3 - 6x^2 + 9x - 27$

125.  $12x^2 - 7x - 10$

126.  $x^2 + 6x + 9$

127.  $6x^2 + 38x + 56$

128.  $2x^2 - 4x - 30$

129.  $36x^2 - 60x + 25$

130.  $3x^2 + 4x + 1$

131.  $2x^2 + 17x + 36$

132.  $x^2 - 2x - 48$

133.  $4x^2 - 30x + 56$

134.  $12x^2 - 10x - 12$

135.  $x^2 + 9x + 20$

136.  $x^2 - 6x - 7$

137.  $18x^3 - 9x^2 - 12x + 6$

138.  $4x^2 - 29x - 63$

139.  $3x^2 - 3x - 6$

140.  $24x^2 - 20x + 4$

141.  $18x^2 + 57x + 24$

142.  $3x^2 - 22x + 24$

143.  $15x^2 - 36x + 21$

144.  $4x^2 + 19x - 30$

145.  $x^3 + x^2 - 3x - 3$

146.  $6x^2 + 21x - 12$

147.  $4x^2 - x - 5$

148.  $4x^2 - 33x + 35$

149.  $2x^3 + 10x^2 + 7x + 35$

150.  $x^2 - 3x + 2$

151.  $x^3 + 6x^2 + 9x + 54$

152.  $x^3 - 2x^2 + 6x - 12$

153.  $4x^3 - 14x^2 + 2x - 7$

154.  $x^2 + 4x - 21$

155.  $2x^2 - 4x - 16$

156.  $4x^2 - 16$

157.  $5x^2 - 36x - 32$

158.  $9x^2 - 18x - 7$

159.  $4x^3 + 16x^2 - 2x - 8$

160.  $3x^3 - 21x^2 - 8x + 56$

161.  $24x^2 + 10x - 21$

162.  $2x^2 - 22x + 56$

163.  $24x^2 - 8x - 42$

164.  $6x^2 + 25x + 24$

165.  $4x^3 + 6x^2 + 6x + 9$

166.  $2x^2 + 5x + 2$

167.  $2x^3 + 8x^2 - 16x - 64$

168.  $4x^3 - 36x^2 - 6x + 54$

169.  $3x^2 - 5x - 12$

170.  $2x^3 + 3x^2 - 18x - 27$

171.  $12x^2 + 22x - 42$

172.  $x^2 - 2x - 3$

173.  $4x^2 + 12x - 40$

174.  $2x^2 - 10x - 28$

175.  $5x^2 + 46x + 9$

176.  $6x^2 - 28x + 16$

177.  $x^2 - 7x - 18$

178.  $5x^2 - 49x + 36$

179.  $6x^3 - 10x^2 + 6x - 10$

180.  $x^3 - 9x^2 + 7x - 63$

181.  $6x^2 - 12x - 18$

182.  $x^3 - 7x^2 - 2x + 14$

183.  $4x^2 + 14x + 12$

184.  $4x^2 - 18x + 18$

185.  $8x^2 - 12x - 20$

186.  $x^3 - x^2 - 8x + 8$

187.  $2x^2 - 13x - 7$

188.  $15x^2 + 42x + 24$

189.  $2x^2 - 9x + 10$

190.  $4x^2 - 36x + 32$

191.  $4x^2 + 16x - 48$



192.  $x^2 + 4x - 45$

193.  $5x^2 - 14x + 8$

194.  $5x^2 - 25x - 30$

195.  $12x^2 - 64x + 64$

196.  $3x^2 - 3x - 18$

197.  $2x^2 + 14x - 16$

198.  $3x^2 + 20x - 32$

199.  $x^2 - 6x - 7$

200.  $20x^2 + 13x - 72$

201.  $x^2 - 5x - 6$

202.  $x^3 - x^2 + 5x - 5$

203.  $2x^2 - 11x + 12$

204.  $12x^3 - 12x^2 - 24x + 24$

205.  $6x^3 + 18x^2 - 16x - 48$

206.  $x^3 - 7x^2 + 5x - 35$

207.  $4x^2 - 28x - 72$

208.  $12x^2 + 11x - 36$

209.  $9x^2 - 3x - 6$

210.  $3x^2 - 24x + 21$

211.  $2x^2 - 9x - 5$

212.  $6x^2 - 6x - 36$

213.  $2x^3 - 6x^2 + 2x - 6$

214.  $x^2 - 1$

215.  $6x^3 + 42x^2 + x + 7$

216.  $2x^2 + 5x - 25$

217.  $5x^3 + 2x^2 - 25x - 10$

218.  $4x^2 - 19x + 21$

219.  $3x^3 - 6x^2 - 2x + 4$

220.  $4x^2 - 23x - 6$

221.  $x^2 - 9x + 14$

222.  $6x^3 + 9x^2 - 18x - 27$

223.  $4x^2 - 12x + 8$

224.  $18x^2 - 54x + 36$

225.  $8x^2 - 10x - 12$

226.  $x^2 - 2x - 8$

227.  $6x^2 + 11x - 10$

228.  $x^2 - 14x + 49$

229.  $6x^2 - 38x - 28$

230.  $8x^3 - 32x^2 - 14x + 56$

231.  $2x^2 - 14x + 24$

232.  $8x^2 - 46x + 45$

233.  $x^2 - 3x + 2$

234.  $8x^2 - 38x + 45$

235.  $16x^2 - 20x + 6$

236.  $4x^2 - 17x + 18$

237.  $5x^2 + 17x - 12$

238.  $5x^2 - 29x - 42$

239.  $4x^2 - 16x + 12$

240.  $24x^3 - 8x^2 + 54x - 18$

241.  $x^2 - 16$

242.  $4x^2 - 25x + 25$

243.  $x^2 + 12x + 27$

244.  $6x^2 + 51x + 63$

245.  $4x^2 + 26x - 48$

246.  $3x^2 + 10x - 48$

247.  $2x^3 - x^2 + 12x - 6$

248.  $2x^2 - 11x + 14$

249.  $4x^2 - 5x - 6$

250.  $x^2 + 9x + 8$

251.  $2x^2 + 6x - 36$

252.  $4x^2 + 34x - 18$

253.  $18x^2 - 81x + 81$

254.  $2x^2 + 4x - 30$

255.  $12x^3 + 2x^2 - 6x - 1$

256.  $x^2 - 5x - 6$

257.  $2x^2 - 14x - 16$

258.  $3x^2 + 26x + 16$

259.  $8x^2 + 2x - 45$

260.  $8x^2 - 18x + 9$

261.  $2x^3 + 4x^2 - 6x - 12$

262.  $20x^3 + 28x^2 + 35x + 49$

263.  $5x^3 - 20x^2 + 9x - 36$

264.  $3x^2 - 28x + 32$

265.  $9x^2 - 30x + 21$

266.  $9x^2 - 4$

267.  $6x^2 + 4x - 2$

268.  $2x^2 - 12x + 16$

269.  $x^2 + 4x - 12$

270.  $2x^2 - 17x + 36$

271.  $x^2 + 9x + 14$

272.  $12x^2 + 47x + 40$

273.  $x^2 - 4x - 21$

274.  $4x^2 + 24x - 28$

275.  $4x^2 - 14x - 30$

276.  $8x^2 - 50x + 63$

277.  $12x^2 + 32x - 64$

278.  $2x^2 - 9x + 7$

279.  $6x^3 + 5x^2 - 24x - 20$

280.  $9x^2 + 12x - 5$

281.  $4x^2 - 31x + 21$

282.  $x^3 - 8x^2 + 4x - 32$

283.  $2x^2 - 23x + 45$

284.  $4x^2 - 11x - 20$

285.  $2x^2 - 12x + 10$

286.  $2x^2 + 11x + 12$

287.  $6x^3 + 24x^2 - 6x - 24$



288.  $10x^3 + 2x^2 - 35x - 7$

289.  $3x^3 - 21x^2 + 8x - 56$

290.  $8x^2 + 18x - 56$

291.  $x^2 + 12x + 32$

292.  $2x^2 + 23x + 56$

293.  $24x^2 + 48x + 24$

294.  $3x^2 - 14x - 24$

295.  $10x^2 - 6x - 28$

296.  $x^2 - 5x - 14$

297.  $18x^2 + 48x + 30$

298.  $x^2 - x - 20$

299.  $6x^2 - 11x - 10$

300.  $5x^2 - 20x + 15$

301.  $4x^2 - 21x - 49$

302.  $6x^2 + 11x + 3$

303.  $12x^2 - 32x + 5$

304.  $x^2 - 5x - 14$

305.  $x^3 + 3x^2 + 8x + 24$

306.  $4x^3 + 18x^2 - 6x - 27$

307.  $16x^2 - 72x + 81$

308.  $30x^3 + 30x^2 - 24x - 24$

309.  $30x^2 + 7x - 49$

310.  $x^2 + 10x + 21$

311.  $x^3 + 4x^2 + 7x + 28$

312.  $4x^2 + 27x + 35$

313.  $x^2 - 1$

314.  $16x^3 + 36x^2 - 12x - 27$

315.  $6x^3 - 4x^2 - 3x + 2$

316.  $8x^2 + 26x - 7$

317.  $2x^2 - 11x + 5$

318.  $6x^3 + 48x^2 - 3x - 24$

319.  $30x^2 - 64x + 32$

320.  $20x^3 - 40x^2 + 16x - 32$

321.  $2x^2 + x - 21$

322.  $2x^2 - 13x + 18$

323.  $25x^2 - 36$

324.  $8x^2 - 44x + 48$

325.  $12x^3 - 16x^2 + 6x - 8$

326.  $10x^2 + 3x - 18$

327.  $x^2 - 12x + 36$

328.  $6x^2 - 2x - 8$

329.  $8x^2 + 16x - 10$

330.  $3x^2 + 3x - 6$

331.  $3x^2 + 14x + 16$

332.  $10x^2 + 22x + 4$

333.  $4x^2 - 12x - 40$

334.  $4x^2 - 8x - 12$

335.  $5x^2 - 32x - 21$

336.  $6x^2 + 24x - 30$

337.  $16x^2 + 36x + 8$

338.  $2x^2 - 8x + 8$

339.  $6x^2 + 41x - 56$

340.  $6x^2 + 17x + 10$

341.  $x^3 - 9x^2 + 4x - 36$

342.  $2x^2 - 17x + 21$

343.  $3x^2 + 22x + 35$

344.  $9x^3 + 18x^2 + 24x + 48$

345.  $4x^2 - 12x - 16$

346.  $x^2 - 14x + 45$

347.  $x^3 - 2x^2 - 8x + 16$

348.  $4x^2 + 22x - 42$

349.  $x^2 + x - 30$

350.  $15x^3 + 3x^2 + 15x + 3$

351.  $18x^2 - 6x - 40$

352.  $2x^2 - 8$

353.  $6x^2 + 2x - 4$

354.  $3x^2 + 13x + 14$

355.  $x^2 - 81$

356.  $4x^2 + 17x - 15$

357.  $12x^2 - 60x + 63$

358.  $6x^2 + 22x - 8$

359.  $12x^3 - 4x^2 - 12x + 4$

360.  $5x^2 - 33x - 14$

361.  $4x^2 - 41x + 45$

362.  $x^2 - 5x - 6$

363.  $24x^2 - 20x - 4$

364.  $5x^2 - 19x - 4$

365.  $4x^2 - 28x + 24$

366.  $5x^3 + x^2 + 10x + 2$

367.  $16x^3 + 4x^2 + 32x + 8$

368.  $2x^2 - 19x + 42$

369.  $18x^2 + 45x - 27$

370.  $x^2 + 5x - 24$

371.  $x^3 - 7x^2 + 6x - 42$

372.  $x^2 - 11x + 30$

373.  $x^3 - 7x^2 + 4x - 28$

374.  $2x^2 - 3x - 20$

375.  $2x^2 - 3x - 27$

376.  $x^2 + 18x + 81$

377.  $2x^2 + 2x - 24$

378.  $6x^2 + 8x - 30$

379.  $3x^3 - 9x^2 - 15x + 45$

380.  $10x^2 - 24x + 8$

381.  $20x^2 + 56x + 36$

382.  $x^2 - 2x + 1$

383.  $2x^2 - 3x - 54$



384.  $6x^2 + 24x - 30$

385.  $2x^2 + 16x + 14$

386.  $3x^3 + 6x^2 - 3x - 6$

387.  $18x^2 - 36x - 54$

388.  $x^2 - 11x + 30$

389.  $4x^3 + 3x^2 - 4x - 3$

390.  $6x^2 - 24x + 24$

391.  $6x^2 + 8x - 8$

392.  $2x^2 - 13x + 6$

393.  $3x^2 - 28x + 9$

394.  $6x^2 + 44x + 14$

395.  $3x^2 + 23x - 8$

396.  $2x^2 + 7x - 49$

397.  $3x^3 + 18x^2 - 3x - 18$

398.  $4x^2 - 11x + 6$

399.  $5x^3 + 40x^2 + x + 8$

400.  $4x^2 - 6x - 4$

401.  $x^2 + 8x + 15$

402.  $6x^2 - 12x - 48$

403.  $2x^2 + 14x + 24$

404.  $2x^2 + 12x - 54$

405.  $9x^3 + 21x^2 + 27x + 63$

406.  $9x^2 + 6x - 35$

407.  $4x^2 + 14x + 12$

408.  $3x^2 - 26x + 48$

409.  $2x^2 + 7x - 9$

410.  $12x^2 - 27x - 27$

411.  $3x^2 + 6x - 9$

412.  $3x^2 + 14x + 15$

413.  $5x^2 + 23x + 12$

414.  $4x^2 + 32x + 28$

415.  $x^2 - 4x + 3$

416.  $6x^2 - 37x - 35$

417.  $10x^2 + 50x + 40$

418.  $x^2 - 9x + 8$

419.  $2x^2 + 12x - 14$

420.  $24x^2 + 20x - 24$

421.  $3x^3 - 6x^2 - 6x + 12$

422.  $3x^2 + 21x - 54$

423.  $3x^3 - 21x^2 - 3x + 21$

424.  $2x^3 + 6x^2 + 4x + 12$

425.  $3x^3 + 9x^2 - x - 3$

426.  $2x^2 + x - 3$

427.  $16x^2 - 56x + 49$

428.  $8x^3 - 14x^2 - 12x + 21$

429.  $2x^3 + 12x^2 + 3x + 18$

430.  $5x^3 - 4x^2 - 10x + 8$

431.  $4x^2 - 34x - 18$

432.  $15x^2 + 57x + 54$

433.  $5x^2 - 23x - 10$

434.  $3x^2 + 12x + 12$

435.  $3x^2 + 15x + 18$

436.  $5x^2 - 37x - 72$

437.  $24x^2 - 52x + 24$

438.  $x^2 + x - 12$

439.  $x^2 - 10x + 24$

440.  $2x^2 + 3x - 20$

441.  $15x^2 + 26x + 8$

442.  $4x^3 + 8x^2 - 36x - 72$

443.  $10x^3 - 6x^2 - 25x + 15$

444.  $x^2 - x - 20$

445.  $4x^2 - 34x + 42$

446.  $20x^2 - 36x + 16$

447.  $2x^2 + 19x + 35$

448.  $2x^2 - x - 28$

449.  $2x^2 - 8x + 6$

450.  $2x^2 - 11x + 12$

451.  $x^2 + 16x + 63$

452.  $6x^2 + 19x + 15$

453.  $6x^3 - 6x^2 + 16x - 16$

454.  $2x^2 - 7x - 9$

455.  $4x^2 + 21x + 20$

456.  $16x^2 - 24x - 27$

457.  $4x^2 + 34x - 18$

458.  $2x^2 - x - 3$

459.  $5x^2 - 23x + 24$

460.  $x^3 + 2x^2 + 8x + 16$

461.  $2x^2 - 5x + 3$

462.  $3x^3 - 3x^2 - 18x + 18$

463.  $6x^2 + 11x - 35$

464.  $30x^3 - 40x^2 + 42x - 56$

465.  $2x^2 - 2x - 12$

466.  $x^2 + 17x + 72$

467.  $4x^2 - 8x - 21$

468.  $3x^3 - 24x^2 + 2x - 16$

469.  $x^2 + 9x + 14$

470.  $5x^2 + 7x - 24$

471.  $5x^2 - 19x + 12$

472.  $4x^2 + 33x + 8$

473.  $3x^2 - 28x + 9$

474.  $2x^2 + 8x - 10$

475.  $4x^2 - 6x - 18$

476.  $4x^2 + 18x + 14$

477.  $3x^2 - 30x + 63$

478.  $x^3 - 2x^2 - 2x + 4$

479.  $2x^2 + 3x - 5$



480.  $5x^3 - 35x^2 + 6x - 42$

481.  $10x^2 - 10x - 20$

482.  $5x^2 + 23x + 24$

483.  $x^2 - 9$

484.  $4x^2 + 22x + 24$

485.  $3x^2 - 15x + 18$

486.  $12x^2 - 31x + 20$

487.  $x^3 + 9x^2 - 4x - 36$

488.  $2x^2 - 9x - 81$

489.  $24x^2 - 20x + 4$

490.  $x^2 - x - 42$

491.  $4x^2 - 19x + 12$

492.  $8x^2 - 12x - 8$

493.  $3x^3 - 12x^2 + 2x - 8$

494.  $4x^2 - 25x + 6$

495.  $20x^3 - 35x^2 + 20x - 35$

496.  $6x^2 - 10x - 4$

497.  $2x^2 + 20x + 32$

498.  $4x^2 + 29x - 63$

499.  $3x^2 + 20x - 32$

500.  $5x^3 + 10x^2 + 6x + 12$