

QUADRATIC FUNCTIONS

Vertex Form



Exit Ticket: Graphing Quadratic Functions in Vertex Form

Graph each quadratic function. Identify the vertex, x-intercepts and y-intercept. Then identify the domain, range, increasing/decreasing intervals and end behavior.

1. $y = x^2 + 12x + 32$

2. $y = x^2 + 4x + 4$

3. $y = x^2 - 10x + 25$

4. $y = x^2 - 6x + 9$

5. $y = x^2 - 4x + 4$

6. $y = x^2 - 8x + 16$

7. $y = x^2 - 12x + 36$

8. $y = x^2 - 16x + 64$

9. $y = x^2 - 18x + 81$

10. $y = x^2 - 20x + 100$

11. $y = x^2 - 22x + 121$

12. $y = x^2 - 24x + 144$

13. $y = x^2 - 26x + 169$

14. $y = x^2 - 28x + 196$

15. $y = x^2 - 30x + 225$

16. $y = x^2 - 32x + 256$

17. $y = x^2 - 34x + 289$

18. $y = x^2 - 36x + 324$

19. $y = x^2 - 38x + 361$

20. $y = x^2 - 40x + 400$

21. $y = x^2 - 42x + 441$

22. $y = x^2 - 44x + 484$

23. $y = x^2 - 46x + 529$

24. $y = x^2 - 48x + 576$

25. $y = x^2 - 50x + 625$

26. $y = x^2 - 52x + 676$

27. $y = x^2 - 54x + 729$

28. $y = x^2 - 56x + 784$

29. $y = x^2 - 58x + 841$

30. $y = x^2 - 60x + 900$

31. $y = x^2 - 62x + 961$

32. $y = x^2 - 64x + 1024$

33. $y = x^2 - 66x + 1089$

34. $y = x^2 - 68x + 1156$

35. $y = x^2 - 70x + 1225$

36. $y = x^2 - 72x + 1296$

37. $y = x^2 - 74x + 1369$

38. $y = x^2 - 76x + 1444$

39. $y = x^2 - 78x + 1521$

40. $y = x^2 - 80x + 1600$

41. $y = x^2 - 82x + 1681$

42. $y = x^2 - 84x + 1764$

43. $y = x^2 - 86x + 1849$

44. $y = x^2 - 88x + 1936$

45. $y = x^2 - 90x + 2025$

46. $y = x^2 - 92x + 2116$

47. $y = x^2 - 94x + 2209$

48. $y = x^2 - 96x + 2304$

49. $y = x^2 - 98x + 2401$

50. $y = x^2 - 100x + 2500$

51. $y = x^2 - 102x + 2601$

52. $y = x^2 - 104x + 2704$

53. $y = x^2 - 106x + 2809$

54. $y = x^2 - 108x + 2916$

55. $y = x^2 - 110x + 3025$

56. $y = x^2 - 112x + 3136$

57. $y = x^2 - 114x + 3249$

58. $y = x^2 - 116x + 3364$

59. $y = x^2 - 118x + 3481$

60. $y = x^2 - 120x + 3600$

61. $y = x^2 - 122x + 3721$

62. $y = x^2 - 124x + 3844$

63. $y = x^2 - 126x + 3969$

64. $y = x^2 - 128x + 4096$

65. $y = x^2 - 130x + 4225$

66. $y = x^2 - 132x + 4356$

67. $y = x^2 - 134x + 4489$

68. $y = x^2 - 136x + 4624$

69. $y = x^2 - 138x + 4761$

70. $y = x^2 - 140x + 4900$

71. $y = x^2 - 142x + 5041$

72. $y = x^2 - 144x + 5184$

73. $y = x^2 - 146x + 5329$

74. $y = x^2 - 148x + 5476$

75. $y = x^2 - 150x + 5625$

76. $y = x^2 - 152x + 5776$

77. $y = x^2 - 154x + 5929$

78. $y = x^2 - 156x + 6084$

79. $y = x^2 - 158x + 6241$

80. $y = x^2 - 160x + 6400$

81. $y = x^2 - 162x + 6561$

82. $y = x^2 - 164x + 6724$

83. $y = x^2 - 166x + 6889$

84. $y = x^2 - 168x + 7056$

85. $y = x^2 - 170x + 7225$

86. $y = x^2 - 172x + 7396$

87. $y = x^2 - 174x + 7569$

88. $y = x^2 - 176x + 7744$

89. $y = x^2 - 178x + 7921$

90. $y = x^2 - 180x + 8100$

91. $y = x^2 - 182x + 8281$

92. $y = x^2 - 184x + 8464$

93. $y = x^2 - 186x + 8649$

94. $y = x^2 - 188x + 8836$

95. $y = x^2 - 190x + 9025$

96. $y = x^2 - 192x + 9216$

97. $y = x^2 - 194x + 9409$

98. $y = x^2 - 196x + 9604$

99. $y = x^2 - 198x + 9801$

100. $y = x^2 - 200x + 10000$

101. $y = x^2 - 202x + 10201$

102. $y = x^2 - 204x + 10404$

103. $y = x^2 - 206x + 10609$

104. $y = x^2 - 208x + 10816$

105. $y = x^2 - 210x + 11025$

106. $y = x^2 - 212x + 11236$

107. $y = x^2 - 214x + 11449$

108. $y = x^2 - 216x + 11664$

109. $y = x^2 - 218x + 11881$

110. $y = x^2 - 220x + 12100$

111. $y = x^2 - 222x + 12321$

112. $y = x^2 - 224x + 12544$

113. $y = x^2 - 226x + 12769$

114. $y = x^2 - 228x + 12996$

115. $y = x^2 - 230x + 13225$

116. $y = x^2 - 232x + 13456$

117. $y = x^2 - 234x + 13689$

118. $y = x^2 - 236x + 13924$

119. $y = x^2 - 238x + 14161$

120. $y = x^2 - 240x + 14400$

121. $y = x^2 - 242x + 14641$

122. $y = x^2 - 244x + 14884$

123. $y = x^2 - 246x + 15129$

124. $y = x^2 - 248x + 15376$

125. $y = x^2 - 250x + 15625$

126. $y = x^2 - 252x + 15876$

127. $y = x^2 - 254x + 16129$

128. $y = x^2 - 256x + 16384$

129. $y = x^2 - 258x + 16641$

130. $y = x^2 - 260x + 16900$

131. $y = x^2 - 262x + 17161$

132. $y = x^2 - 264x + 17424$

133. $y = x^2 - 266x + 17689$

134. $y = x^2 - 268x + 17956$

135. $y = x^2 - 270x + 18225$

136. $y = x^2 - 272x + 18496$

137. $y = x^2 - 274x + 18769$

138. $y = x^2 - 276x + 19044$

139. $y = x^2 - 278x + 19321$

140. $y = x^2 - 280x + 19600$

141. $y = x^2 - 282x + 19881$

142. $y = x^2 - 284x + 20164$

143. $y = x^2 - 286x + 20449$

144. $y = x^2 - 288x + 20736$

145. $y = x^2 - 290x + 21025$

146. $y = x^2 - 292x + 21316$

147. $y = x^2 - 294x + 21609$

148. $y = x^2 - 296x + 21904$

149. $y = x^2 - 298x + 22201$

150. $y = x^2 - 300x + 22500$

151. $y = x^2 - 302x + 22801$

152. $y = x^2 - 304x + 23104$

153. $y = x^2 - 306x + 23409$

154. $y = x^2 - 308x + 23716$

155. $y = x^2 - 310x + 24025$

156. $y = x^2 - 312x + 24336$

157. $y = x^2 - 314x + 24649$

158. $y = x^2 - 316x + 24964$

159. $y = x^2 - 318x + 25281$

160. $y = x^2 - 320x + 25600$

161. $y = x^2 - 322x + 25921$

162. $y = x^2 - 324x + 26244$

163. $y = x^2 - 326x + 26569$

164. $y = x^2 - 328x + 26896$

165. $y = x^2 - 330x + 27225$

166. $y = x^2 - 332x + 27556$

167. $y = x^2 - 334x + 27889$

168. $y = x^2 - 336x + 28224$

169. $y = x^2 - 338x + 28561$

170. $y = x^2 - 340x + 28900$

171. $y = x^2 - 342x + 29241$

172. $y = x^2 - 344x + 29584$

173. $y = x^2 - 346x + 29929$

174. $y = x^2 - 348x + 30276$

175. $y = x^2 - 350x + 30625$

176. $y = x^2 - 352x + 30976$

177. $y = x^2 - 354x + 31329$

178. $y = x^2 - 356x + 31684$

179. $y = x^2 - 358x + 32041$

180. $y = x^2 - 360x + 32400$

181. $y = x^2 - 362x + 32761$

182. $y = x^2 - 364x + 33124$

183. $y = x^2 - 366x + 33489$

184. $y = x^2 - 368x + 33856$

185. $y = x^2 - 370x + 34225$

186. $y = x^2 - 372x + 34596$

187. $y = x^2 - 374x + 34969$

188. $y = x^2 - 376x + 35344$

189. $y = x^2 - 378x + 35721$

190. $y = x^2 - 380x + 36100$

191. $y = x^2 - 382x + 36481$

192. $y = x^2 - 384x + 36864$

193. $y = x^2 - 386x + 37249$

194. $y = x^2 - 388x + 37636$

195. $y = x^2 - 390x + 38025$

196. $y = x^2 - 392x + 38416$

197. $y = x^2 - 394x + 38809$

198. $y = x^2 - 396x + 39204$

199. $y = x^2 - 398x + 39601$

200. $y = x^2 - 400x + 40000$

201. $y = x^2 - 402x + 40401$

202. $y = x^2 - 404x + 40804$

203. $y = x^2 - 406x + 41209$

204. $y = x^2 - 408x + 41616$

205. $y = x^2 - 410x + 42025$

206. $y = x^2 - 412x + 42436$

207. $y = x^2 - 414x + 42849$

208. $y = x^2 - 416x + 43264$

209. $y = x^2 - 418x + 43681$

210. $y = x^2 - 420x + 44100$

211. $y = x^2 - 422x + 44521$

212. $y = x^2 - 424x + 44944$

213. $y = x^2 - 426x + 45369$

214. $y = x^2 - 428x + 45796$

215. $y = x^2 - 430x + 46225$

216. $y = x^2 - 432x + 46656$

217. $y = x^2 - 434x + 47089$

218. $y = x^2 - 436x + 47524$

219. $y = x^2 - 438x + 47961$

220. $y = x^2 - 440x + 48400$

221. $y = x^2 - 442x + 48841$

222. $y = x^2 - 444x + 49284$

223. $y = x^2 - 446x + 49729$

224. $y = x^2 - 448x + 50176$

225. $y = x^2 - 450x + 50625$

226. $y = x^2 - 452x + 51076$

227. $y = x^2 - 454x + 51529$

228. $y = x^2 - 456x + 51984$

229. $y = x^2 - 458x + 52441$

230. $y = x^2 - 460x + 52900$

231. $y = x^2 - 462x + 53361$

232. $y = x^2 - 464x + 53824$

233. $y = x^2 - 466x + 54289$

234. $y = x^2 - 468x + 54756$

235. $y = x^2 - 470x + 55225$

236. $y = x^2 - 472x + 55696$

237. $y = x^2 - 474x + 56169$

238. $y = x^2 - 476x + 56644$

239. $y = x^2 - 478x + 57121$

240. $y = x^2 - 480x + 57600$

241. $y = x^2 - 482x + 58081$

242. $y = x^2 - 484x + 58564$

243. $y = x^2 - 486x + 59049$

244. $y = x^2 - 488x + 59536$

245. $y = x^2 - 490x + 60025$

246. $y = x^2 - 492x + 60516$

247. $y = x^2 - 494x + 61009$

248. $y = x^2 - 496x + 61504$

249. $y = x^2 - 498x + 62001$

250. $y = x^2 - 500x + 62500$

251. $y = x^2 - 502x + 63001$

252. $y = x^2 - 504x + 63504$

253. $y = x^2 - 506x + 64009$

254. $y = x^2 - 508x + 64516$

255. $y = x^2 - 510x + 65025$

256. $y = x^2 - 512x + 65536$

257. $y = x^2 - 514x + 66049$

258. $y = x^2 - 516x + 66564$

259. $y = x^2 - 518x + 67081$

260. $y = x^2 - 520x + 67600$

261. $y = x^2 - 522x + 68121$

262. $y = x^2 - 524x + 68644$

263. $y = x^2 - 526x + 69169$

264. $y = x^2 - 528x + 69696$

265. $y = x^2 - 530x + 70225$

266. $y = x^2 - 532x + 70756$

267. $y = x^2 - 534x + 71289$

268. $y = x^2 - 536x + 71824$

269. $y = x^2 - 538x + 72361$

270. $y = x^2 - 540x + 72900$

271. $y = x^2 - 542x + 73441$

272. $y = x^2 - 544x + 73984$

273. $y = x^2 - 546x + 74529$

274. $y = x^2 - 548x + 75076$

275. $y = x^2 - 550x + 75625$

276. $y = x^2 - 552x + 76176$

277. $y = x^2 - 554x + 76729$

278. $y = x^2 - 556x + 77284$

279. $y = x^2 - 558x + 77841$

280. $y = x^2 - 560x + 78400$

281. $y = x^2 - 562x + 78961$

282. $y = x^2 - 564x + 79524$

283. $y = x^2 - 566x + 80089$

284. $y = x^2 - 568x + 80656$

285. $y = x^2 - 570x + 81225$

286. $y = x^2 - 572x + 81796$

287. $y = x^2 - 574x + 82369$

288. $y = x^2 - 576x + 82944$

289. $y = x^2 - 578x + 83521$

290. $y = x^2 - 580x + 84100$

291. $y = x^2 - 582x + 84681$

292. $y = x^2 - 584x + 85264$

293. $y = x^2 - 586x + 85849$

294. $y = x^2 - 588x + 86436$

295. $y = x^2 - 590x + 87025$

296. $y = x^2 - 592x + 87616$

297. $y = x^2 - 594x + 88209$

298. $y = x^2 - 596x + 88804$

299. $y = x^2 - 598x + 89401$

300. $y = x^2 - 600x + 90000$

301. $y = x^2 - 602x + 90601$

302. $y = x^2 - 604x + 91204$

303. $y = x^2 - 606x + 91809$

304. $y = x^2 - 608x + 92416$

305. $y = x^2 - 610x + 93025$

306. $y = x^2 - 612x + 93636$

307. $y = x^2 - 614x + 94249$

308. $y = x^2 - 616x + 94864$

309. $y = x^2 - 618x + 95481$

310. $y = x^2 - 620x + 96100$

311. $y = x^2 - 622x + 96721$

312. $y = x^2 - 624x + 97344$

313. $y = x^2 - 626x + 97969$

314. $y = x^2 - 628x + 98596$

315. $y = x^2 - 630x + 99225$

316. $y = x^2 - 632x + 99856$

317. $y = x^2 - 634x + 100489$

318. $y = x^2 - 636x + 101124$

319. $y = x^2 - 638x + 101761$

320. $y = x^2 - 640x + 102400$

321. $y = x^2 - 642x + 103041$

322. $y = x^2 - 644x + 103684$

323. $y = x^2 - 646x + 104329$

324. $y = x^2 - 648x + 104976$

325. $y = x^2 - 650x + 105625$

326. $y = x^2 - 652x + 106276$

327. $y = x^2 - 654x + 106929$

328. $y = x^2 - 656x + 107584$

329. $y = x^2 - 658x + 108241$

330. $y = x^2 - 660x + 108900$

331. $y = x^2 - 662x + 109561$

332. $y = x^2 - 664x + 110224$

333. $y = x^2 - 666x + 110889$

334. $y = x^2 - 668x + 111556$

335. $y = x^2 - 670x + 112225$

336. $y = x^2 - 672x + 112896$

337. $y = x^2 - 674x + 113569$

338. $y = x^2 - 676x + 114244$

339. $y = x^2 - 678x + 114921$

340. $y = x^2 - 680x + 115600$

341. $y = x^2 - 682x + 116281$

342. $y = x^2 - 684x + 116964$

343. $y = x^2 - 686x + 117649$

344. $y = x^2 - 688x + 118336$

345. $y = x^2 - 690x + 119025$

346. $y = x^2 - 692x + 119716$

347. $y = x^2 - 694x + 120409$

348. $y = x^2 - 696x + 121104$

349. $y = x^2 - 698x + 121801$

350. $y = x^2 - 700x + 122500$

351. $y = x^2 - 702x + 123201$

352. $y = x^2 - 704x + 123904$

353. $y = x^2 - 706x + 124609$

354. $y = x^2 - 708x + 125316$

355. $y = x^2 - 710x + 126025$

356. $y = x^2 - 712x + 126736$

357. $y = x^2 - 714x + 127449$

358. $y = x^2 - 716x + 128164$

359. $y = x^2 - 718x + 128881$

360. $y = x^2 - 720x + 129600$

361. $y = x^2 - 722x + 130321$

362. $y = x^2 - 724x + 131044$

363. $y = x^2 - 726x + 131769$

364. $y = x^2 - 728x + 132496$

365. $y = x^2 - 730x + 133225$

366. $y = x^2 - 732x + 133956$

367. $y = x^2 - 734x + 134689$

368. $y = x^2 - 736x + 135424$

369. $y = x^2 - 738x + 136161$

370. $y = x^2 - 740x + 136900$

371. $y = x^2 - 742x + 137641$

372. $y = x^2 - 744x + 138384$

373. $y = x^2 - 746x + 139129$

374. $y = x^2 - 748x + 139876$

375. $y = x^2 - 750x + 140625$

376. $y = x^2 - 752x + 141376$

377. $y = x^2 - 754x + 142129$

378. $y = x^2 - 756x + 142884$

379. $y = x^2 - 758x + 143641$

380. $y = x^2 - 760x + 144400$

381. $y = x^2 - 762x + 145161$

382. $y = x^2 - 764x + 145924$

383. $y = x^2 - 766x + 146689$

384. $y = x^2 - 768x + 147456$

385. $y = x^2 - 770x + 148225$

386. $y = x^2 - 772x + 148996$

387. $y = x^2 - 774x + 149769$

388. $y = x^2 - 776x + 150544$

389. $y = x^2 - 778x + 151321$

390. $y = x^2 - 780x + 152100$

391. $y = x^2 - 782x + 152881$

392. $y = x^2 - 784x + 153664$

393. $y = x^2 - 786x + 154449$

394. $y = x^2 - 788x + 155236$

395. $y = x^2 - 790x + 156025$

396. $y = x^2 - 792x + 156816$

397. $y = x^2 - 794x + 157609$

398. $y = x^2 - 796x + 158404$

399. $y = x^2 - 798x + 159201$

400. $y = x^2 - 800x + 160000$

401. $y = x^$