

Chapter 10 Review

213. $x = \pm 10$

214. $y = \pm 12$

215. $m = \pm 2\sqrt{10}$

216. $n = \pm 4\sqrt{5}$

217. $a = \pm 5$

218. $b = \pm 6$

219. no solution

220. no solution

221. $v = \pm 3\sqrt{2}$

222. $w = \pm 5\sqrt{3}$

223. $c = \pm \frac{4\sqrt{5}}{5}$

224. $d = \pm \frac{7\sqrt{3}}{3}$

225. $p = 1, 9$

226. $q = -7, -1$

227. $u = -1 \pm 3\sqrt{5}$

228. $z = 5 \pm 5\sqrt{2}$

229. $x = \frac{1 \pm \sqrt{3}}{4}$

230. $y = \frac{2 \pm \sqrt{2}}{3}$

231. $m = 7 \pm 2\sqrt{6}$

232. $n = 4 \pm 10\sqrt{2}$

233. no solution

234. no solution

235. $m = 3 \pm 4\sqrt{3}$

236. $n = -5 \pm 2\sqrt{3}$

237. $a = -\frac{3}{2}, \frac{3}{4}$

238. $b = 1, 6$

239. $(x+11)^2$

240. $(y+3)^2$

241. $(m-4)^2$

242. $(n-5)^2$

243. $\left(a - \frac{3}{2}\right)^2$

244. $\left(b + \frac{13}{2}\right)^2$

245. $\left(p + \frac{2}{5}\right)^2$

246. $\left(q - \frac{1}{6}\right)^2$

247. $c = 1, -21$

248. $d = -13, -1$

249. $x = -4, 8$

250. $y = -2, 18$

251. no solution

252. no solution

253. $v = 7 \pm 3\sqrt{2}$

254. $w = 10 \pm 10\sqrt{2}$

255. $m = -9, -1$

256. $n = 3 \pm 4\sqrt{2}$

257. $a = \frac{3 \pm \sqrt{41}}{2}$

258. $b = \frac{11 \pm \sqrt{101}}{2}$

259. $u = -6 \pm 2\sqrt{2}$

260. $z = -4, 12$

261. $p = 0, 6$

262. $q = -7 \pm 3\sqrt{5}$

263. $y = -\frac{1}{2}, 2$

264. $x = -2, 1$

265. $c = \frac{-1 \pm 2\sqrt{7}}{3}$

266. $d = \frac{1 \pm \sqrt{33}}{4}$

267. $x = \frac{1}{4}, 1$

268. $y = -1, \frac{3}{7}$

269. $r = -6, 7$

270. $t = -11, -2$

271. $v = -\frac{5}{4}, 1$

272. $w = \frac{-9 \pm \sqrt{65}}{4}$

273. $m = \frac{-4 \pm \sqrt{10}}{3}$

274. $n = \frac{-1 \pm \sqrt{6}}{5}$

275. no real solution

276. no real solution

277. $u = 5 \pm \sqrt{22}$

278. $z = \frac{5 \pm 2\sqrt{10}}{5}$

279. $p = \frac{4 \pm \sqrt{6}}{5}$

280. $q = \frac{1}{4}, -1$

281. $c = -\frac{1}{2}$

282. $d = \frac{2}{3}$

283. (a) 1 (b) 2 (c) 2 (d) none

284. (a) 2 (b) none (c) 1 (d) none

285. (a) factor (b) Quadratic

Formula (c) square root

286. (a) Quadratic Formula (b)

factor (c) square root

287. Two consecutive odd numbers whose product is 323 are 17 and 19, and -17 and -19 .

288. Two consecutive even numbers whose product is 624 are 24 and 26, and -24 and -26 .

289. The height of the banner is 13 cm and the length of the side is 54 cm.

290. The height is 14 inches and the width is 10 inches.

291. The lengths of the sides of the mosaic are 2.2 and 4.4 feet.

292. The length of the diagonal is 3.6 feet.

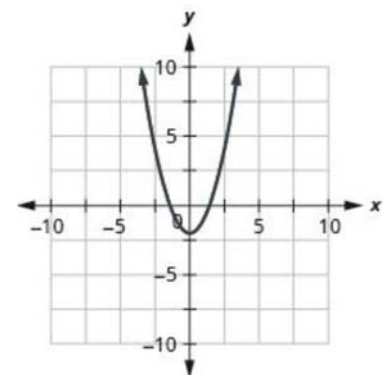
293. The width of the front walk is 8.1 feet and its length is 30.8 feet.

294. The width of the serving table is 4.7 feet and the length is 16.1 feet.

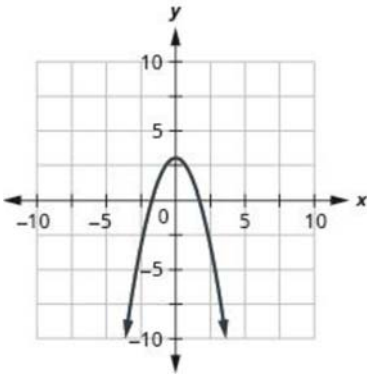
295. The ball will reach 384 feet on its way up in 4 seconds and on the way down in 6 seconds.

296. The bullet will reach 800 feet on its way up in 3 seconds and on the way down in 17 seconds.

297.



298.



299. down

300. up

301. up

302. down

303. (a) $x = 3$ (b) $(3, 17)$

304. (a) $x = 2$ (b) $(2, -7)$

305. $y: (0, 5)$; $x: (5, 0), (-1, 0)$

306. $y: (0, 15)$; $x: (3, 0), (5, 0)$

307. $y: (0, 10)$; $x: \text{none}$

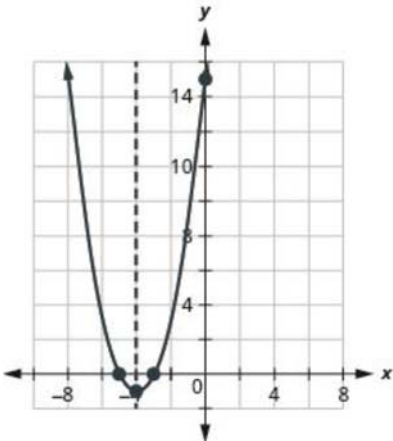
308. $y: (0, -46)$; $x: \text{none}$

309. $y: (0, 1)$; $x: \left(\frac{1}{4}, 0\right)$;

310. $y: (0, 64)$; $x: (-8, 0)$

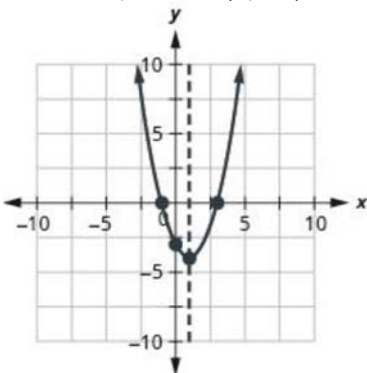
311. $y: (0, 15)$; $x: (-3, 0), (-5, 0)$;

axis: $x = -4$; vertex: $(-4, -1)$

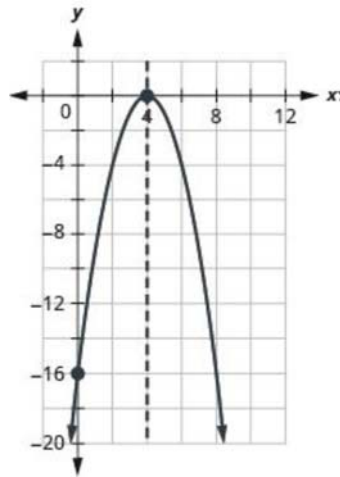


312. $y: (0, -3)$ $x: (-1, 0), (3, 0)$;

axis: $x = 1$; vertex: $(1, -4)$

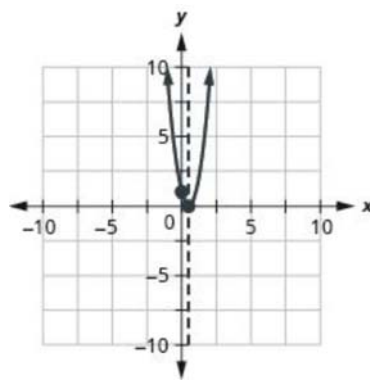


313. $y: (0, -16)$; $x: (4, 0)$; axis: $x = 4$; vertex: $(4, 0)$

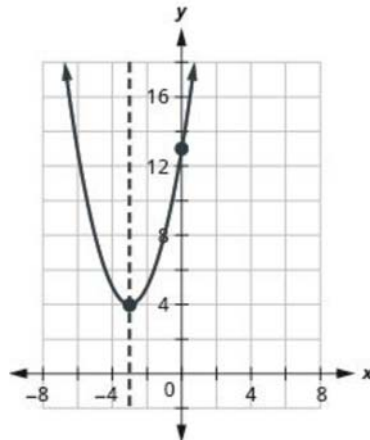


314. $y: (0, 1)$; $x: \left(\frac{1}{2}, 0\right)$; axis: ;

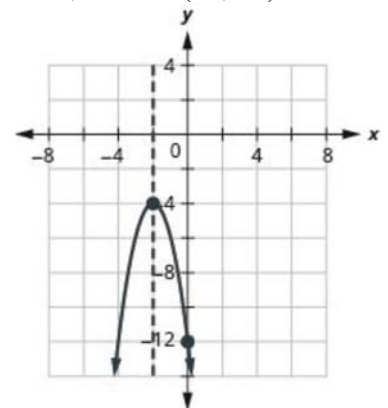
vertex: $\left(\frac{1}{2}, 0\right)$



315. $y: (0, 13)$; $x: \text{none}$; axis: $x = -3$; vertex: $(-3, 4)$

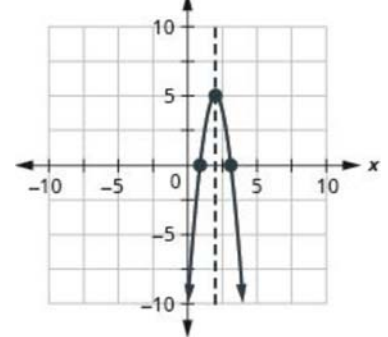


316. $y: (0, -12)$; $x: \text{none}$; axis: $x = -2$; vertex: $(-2, -4)$



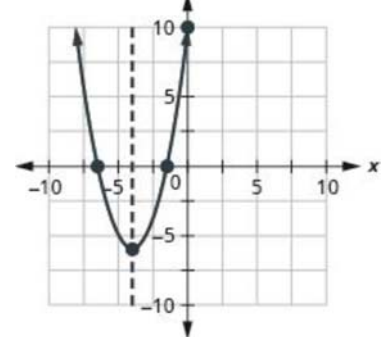
317. $y: (0, -11)$ $x: (3.1, 0), (0.9, 0)$;

axis: $x = 2$; vertex: $(2, 5)$



318. $y: (0, 10)$; $x: (-1.6, 0), (-6.4, 0)$;

axis: $x = -4$; vertex: $(-4, -6)$



319. The minimum value is -1 when $x = -1$.

320. The maximum value is 2 when $x = 2$.

321. In 3.5 seconds the ball is at its maximum height of 196 feet.

322. The length adjacent to the building is 90 feet, giving a maximum area of 4050 square feet.