1.

6-10-14

TSI

Math Review

TSI

TSI MO100 Quest

(1) $2+6$

(2) $-2+6$

(3) $2-6$

(4) $-2-6$

(5) $-2(-3)$

(6) $2(3)$

(7) $-2(3)$

(8) $2(-3)$

(9) $\frac{-8}{2}$

(10) $\frac{8}{2}$

(11) $\frac{-8}{2}$

(12) $\frac{8}{-2}$

(13) $(-2)^2$

(14) -4^2

(15) $-5^2-(-4)^2$

(16) $\frac{1}{5}+\frac{2}{5}$

(17) $\frac{1}{8}+\frac{3}{8}$

(18) $\frac{1}{2}+\frac{1}{3}$

(19) $\frac{1}{4}+\frac{1}{6}$

(20) $-\frac{1}{4}+\frac{1}{6}$

RAC 2014

(21) $\frac{0}{2}$

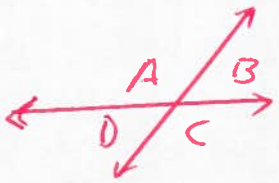
(22) $\frac{-4}{0}$

2

(23) Find mean 2000, 2080, 2200, 1140, 1600

(24) Find mode 10, 20, 20, 60, 90

(25) Find the mean of A and B



(26) Find P if $P = 2L + 2W$ $L = 10$, $W = 5$

(27) Find A if $A = LW$ $L = 10$, $W = 4$

(28) Find V if $V = LWH$ $L = 10$, $W = 4$, $H = 5$

(29) Find A if $A = \frac{1}{2}BH$ $B = 10$, $H = 4$

(30) Find V if $V = x^3$ $x = 2$

(31) Find C if $A^2 + B^2 = C^2$ $A = 4$, $B = 3$

(32) Find B if $A^2 + B^2 = C^2$ $A = 3$, $C = 5$

(33) Find A if $A = \frac{1}{2}H(B + C)$ $H = 4$, $B = 10$, $C = 8$

(34) Find M if $M = \frac{A - B}{C - D}$ $A = -8$, $B = -2$, $C = -10$, $D = 2$

(35) Find A if $A = x^2$ $x = 4$

(36) Find A if $A = x^2$ $x = \frac{3}{4}$

(37) Find A if $A = x^3$ $x = \frac{3}{4}$

(38) Find A if $A = x^3$ $x = \frac{m}{5}$

(39) Evaluate $Pr - r$ if $P = -7$, $r = \frac{1}{8}$

(40) Evaluate $Pr - r$ if $P = -8$, $r = \frac{1}{5}$

(41) If $x = \frac{1}{5}$ and $y = -x$ find $x + y$

(42) If $x = -\frac{2}{5}$ and $y = -x$ find $x - y$

(43.) Simplify $x + (2x + 3)$

(44.) Simplify $x + (4x + 5)$

(45.) Simplify $d - .12d$

(46) Simplify $d - .25d$

(47) Simplify $P - .20P$

(48) Simplify $.80c - .05(.80c)$

(49) Find P if $P = 2(L + w)$ $L = 10$, $w = 6$

(50) Find y if $y = \sqrt{x+1} + 2$ $x = 3$

(51) Find y if $y = \sqrt{x+1} + 2$ $x = 8$

(52) Find y if $y = \sqrt{x+1} + 2$ $x = -1$

(53) Find y if $y = \frac{3}{2}x + 5$ $x = -\frac{2}{3}$

(54) Find t if $t = \frac{\sqrt{x}}{4}$ $x = 32$

(55) Find t if $t = \frac{\sqrt{x}}{4}$ $x = 8$

(56) Find t if $t = \frac{\sqrt{x}}{4}$ $x = 80$

(57) Find y if $y = x^2$ $x = \frac{3}{4}$

(58) Find d if $d = rt$ $r = 60$, $t = 2$

(59) Find m if $m = 10t$ $t = 4$

(60) Find E if $E = \frac{1}{2}mv^2$ $m = 200$, $v = 10$

(61) Find F if $F = ma$ $m = 100$, $a = 40$

(62) Find y if $y = \frac{3}{2}x$ $x = 0$

(63) Find y if $y = \frac{3}{2}x$ $x = 2$

(64) Find y if $y = \frac{1}{2}x$ $x = 0$

(65) find y if $y = \frac{1}{2}x$ $x = 2$

(66) Find y if $y = x - 2$ $x = 0$

(67) Find y if $y = x - 2$ $x = 1$

(68) Find y if $y = x + 2$ $x = 0$

(69) find y if $y = x + 2$ $x = 1$

(70) Find y if $y = x^2$ $x = -1$

(71) find y if $y = x^2$ $x = 0$

(72) Find y if $y = x^2$ $x = 1$

(73) find y if $y = -x^2$ $x = -1$

(74) find y if $y = -x^2$ $x = 0$

(75) find y if $y = -x^2$ $x = 1$

(76) find y if $y = 0x + 2$ $x = 4$

(77) find y if $y = 0x + 2$ $x = 1$

(78) find y if $y = 2$ $x = 5$

(79) Find y if $y = x^2 - 4$ $x = -1$

(80) Find y if $y = x^2 - 4$ $x = 0$

(81) Find y if $y = x^2 - 4$ $x = 1$

(82) Find y if $y = (x+1)(x-3)$ $x = 3$

(83) Find y if $y = (x+1)(x-3)$ $x = -1$

(84) Find y if $y = (x+1)(x-3)$ $x = -2$

(85) Find y if $y = x^2 - 2x + 3$ $x = -2$

(86) Find y if $y = x^2 - 2x + 3$ $x = 0$

(87) Find y if $y = (x-1)^2 - 4$ $x = 1$

(88) Find y if $y = (x-1)^2 - 4$ $x = 0$

(89) Find y if $y = (x-1)^2 - 4$ $x = -1$

(90) Find y if $y = \frac{x+1}{x-4}$ $x = 5$

(91) Find y if $y = \frac{x+1}{x-4}$ $x = 4$

(92) Find y if $y = \frac{x+1}{x-4}$ $x = 0$

(93) Find y if $y = \frac{x-1}{x^2-4}$ $x = -1$

(94) Find y if $y = \frac{x-1}{x^2-4}$ $x = 1$

(95) Find y if $y = \frac{x-1}{x^2-4}$ $x = 2$

(96) Find y if $y = \frac{x-1}{x^2-4}$ $x = -4$

97. Find y if $y = 2x^2 - 3x + 1$ $x = -1$

98. Find y if $y = 2x^2 - 3x + 1$ $x = 0$

99. Find y if $y = 2x^2 - 3x + 1$ $x = 1$

100. Find y if $y = x^{-2}$ $x = 4$

101. Find y if $y = x^{-2}$ $x = 6$

102. Find y if $y = x^{-2}$ $x = 8$

103. Find y if $y = \frac{1}{x} + \frac{4}{x}$ $x = \frac{1}{2}$

104. Find y if $y = \frac{1}{x} + \frac{8}{x}$ $x = \frac{1}{3}$

105. Find y if $y = \frac{2}{x} + \frac{3}{x}$ $x = \frac{1}{4}$

106. $x + 1 = 2$ $x =$

107. $x - 1 = 3$ $x =$

108. $2x = 4$ $x =$

109. $\frac{x}{3} = 6$ $x =$

110. $2x + 1 = 7$ $x =$

111. $2x - 1 = 5$ $x =$

112. $x + 1 = -1$ $x =$

113. $x - 8 = -9$ $x =$

114. $-2x + 4 = 12$ $x =$

115. $-2(x + 1) = -12$ $x =$

116. $-2(x - 4) = 16$ $x =$

117 $\frac{x}{2} = \frac{x+8}{3}$ x=

118 $\frac{x-1}{x} = 10$ x=

119 $\frac{x+2}{x} = 17$ x=

120 $\frac{x}{2} = \frac{x+12}{3}$ x=

121 $\frac{6x}{3} = 24$ x=

122 $1 + \frac{8}{x} = -3$ x=

123 $8x + 4 = 6x$ x=

124 $9 - x = 2(x - 9)$ x=

125 $3(2x - 9) = 6$ x=

126 $9x - 1 = x$ then $16x =$

127 $7x - 3 = 5x + 4$ x=

128 $7x - 3 = 5x - 3$ x=

129 $50x + 300 = 900$ x=

130 $4 + 3x = -3$ x=

131 $6(x - 2) - 12 = 3x$ x=

132 $\frac{3}{2}x + 8 = -\frac{3}{2}x + 3$ x=

133 $\frac{2}{5x} + \frac{1}{x} = 14$ x=

134 $\frac{2}{5x} + \frac{1}{x} = 7$ x=

135. $7.95x + 4.25(30-x) = 164.50$ $x=$

136. $2x<10$

137. $-3x<12$

138. $4x<-16$

139. $-5x<-30$

140. $x-2<-6$

141. $x+2<-4$

142. $2x+1<9$

143. $2x-1<5$

144. $-2x+10<30$

145. $-4x+8<-12$

146. $4x+2<2x+12$

147. $2x+1<4x-9$

148. $-2(x+1)<20$

149. $2(x-1)<-8$

150. $-2(x-1)<2x+42$

151. $2x+3<x$

152. $\frac{x}{5}+\frac{3x}{10}>0$

153. $\frac{x}{5}+\frac{3x}{10}>20$

154. $\frac{x}{5}+\frac{3x}{10}>4$

155 $d = rt$ | $r =$

156 $d = rt$ | $t =$

157 $m = 10t$ | $t =$

158 $m = 40t$ | $t =$

159 $ax + by = c$ | $x =$

160 $ax + by = c$ | $y =$

161 $P = 2L + 2w$ | $L =$

162 $y = mx + b$ | $x =$

163 $y = x^2$ | $x =$

164 $y = mx^2$ | $x =$

165 $y = \frac{1}{5}mx^2$ | $x =$

166 $2x + 2y = m$ | $x + y =$ Terms of m

167 $4x + 6y = m$ | $2x + 3y =$ terms of m

168 $4x^2 + 4y^2 = m$ | $x^2 + y^2 =$ Terms of m

169 $4x^2 + 14y^2 = m$ | $2x^2 + 7y^2 =$ Terms of m

170 $10x^2 - 35y^2 = m$ | $2x^2 - 7y^2 =$ Terms of m

171 $f(x) = 2x$ | $f(0) =$

172 $f(x) = 2x$ | $f(1) =$

173 $f(x) = x - 2$ | $f(0) =$

174 $f(x) = x - 2$ | $f(1) =$

175 $f(x) = \frac{1}{2}x$ | $f(0) =$

176 $f(x) = \frac{1}{2}x$ | $f(2) =$

177 $f(x) = \frac{3}{2}x$ | $f(0) =$

178 $f(x) = \frac{3}{2}x$ | $f(2) =$

179 $f(x) = \frac{2}{3}x$ | $f(0) =$

180 $f(x) = \frac{2}{3}x$ | $f(3) =$

181 $f(x) = 2$ | $f(0) =$

182 $f(x) = 2$ | $f(1) =$

183 $f(x) = -2$ | $f(0) =$

184 $f(x) = -2$ | $f(1) =$

185 $f(x) = 4$ | $f(0) =$

186 $f(x) = 4$ | $f(1) =$

187 $f(x) = 2x + 4$ | $f(0) =$

188 $f(x) = 2x + 4$ | $f(1) =$

189 $f(x) = 2x - 4$ | $f(0) =$

190 $f(x) = 2x - 4$ | $f(1) =$

191 $f(x) = \frac{2}{3}x + 1$ | $f(0) =$

192 $f(x) = \frac{2}{3}x + 1$ | $f(3) =$

193 $f(x) = -\frac{2}{3}x + 1$ $f(0) =$

194 $f(x) = -\frac{2}{3}x + 1$ $f(3) =$

195. $f(x) = x^2$ $f(-1) =$

196 $f(x) = x^2$ $f(0) =$

197 $f(x) = x^2$ $f(-1) =$

198. $f(x) = -x^2$ $f(-1) =$

199 $f(x) = -x^2$ $f(0) =$

200. $f(x) = -x^2$ $f(1) =$

201 $f(x) = x^2 - 4$ $f(-1) =$

202 $f(x) = x^2 - 4$ $f(0) =$

203 $f(x) = x^2 - 4$ $f(1) =$

204. $f(x) = x^2 + 4$ $f(-1) =$

205 $f(x) = x^2 + 4$ $f(0) =$

206 $f(x) = x^2 + 4$ $f(1) =$

207 $f(x) = (x+1)(x-3)$ $f(-1) =$

208 $f(x) = (x+1)(x-3)$ $f(0) =$

209 $f(x) = (x+1)(x-3)$ $f(-2) =$

210 $f(x) = (x-1)^2 - 4$ $f(-1) =$

211 $f(x) = (x-1)^2 - 4$ $f(0) =$

212 $f(x) = (x-1)^2 - 4$ $f(1) =$

213 $f(x) = -(x+1)^2+4$ $f(-1) =$

214 $f(x) = -(x+1)^2+4$ $f(0) =$

215 $f(x) = -(x+1)^2+4$ $f(1) =$

216 $f(x) = x^2-2x-3$ $f(-1) =$

217 $f(x) = x^2-2x-3$ $f(0) =$

218 $f(x) = x^2-2x-3$ $f(1) =$

219 $f(x) = -x^2+2x+1$ $f(-1) =$

220 $f(x) = -x^2+2x+1$ $f(0) =$

221 $f(x) = -x^2+2x+1$ $f(1) =$

222 $f(x) = 2x^2+3x+1$ $f(-1) =$

223 $f(x) = 2x^2+3x+1$ $f(0) =$

224 $f(x) = 2x^2+3x+1$ $f(1) =$

225 $f(x) = -2x^2-2x-1$ $f(-1) =$

226 $f(x) = -2x^2-2x-1$ $f(0) =$

227 $f(x) = -2x^2-2x-1$ $f(1) =$

228 $f(x) = \frac{x+1}{x-4}$ $f(-1) =$

229 $f(x) = \frac{x+1}{x-4}$ $f(1) =$

230 $f(x) = \frac{x+1}{x-4}$ $f(4) =$

231. $f(x) = \frac{x-1}{x^2-4}$ $f(-2) =$

232 $f(x) = \frac{x-1}{x^2-4}$ $f(2) =$

233 $f(x) = \frac{x-1}{x^2-4}$ $f(5) =$

234 $f(x) = \frac{x-1}{x^2-4}$ $f(-5) =$

235 $f(x) = \sqrt{x-1} + 2$ $f(1) =$

236 $f(x) = \sqrt{x-1} + 2$ $f(2) =$

237 $f(x) = \sqrt{x-1} + 2$ $f(5) =$

238 $f(x) = \sqrt{x+1} + 2$ $f(-1) =$

239 $f(x) = \sqrt{x+1} + 2$ $f(0) =$

240 $f(x) = \sqrt{x+1} + 2$ $f(3) =$

241 $f(x) = \frac{1}{x}$ $f(0) =$

242 $f(x) = \frac{1}{x}$ $f(\frac{1}{3}) =$

243 $f(x) = \frac{1}{x} + \frac{4}{x}$ $f(\frac{1}{2}) =$

244 $f(x) = \frac{1}{x} + \frac{4}{x}$ $f(\frac{1}{4}) =$

245 $f(x) = \frac{4}{x} + \frac{5}{x}$ $f(\frac{1}{3}) =$

246 $f(x) = \frac{4}{x} - \frac{5}{x}$ $f(\frac{1}{3}) =$

247 $f(x) = x^{-2}$ $f(2) =$

248 $f(x) = x^{-2}$ $f(3) =$

249 $f(x) = x^{-2}$ $f(4) =$

250 $f(x) = |x-1|$ $f(-1) =$

251 $f(x) = |x-1|$ $f(0) =$

252 $f(x) = |x-1|$ $f(1) =$

253 $f(x) = |2x-5|$ $f(-2)$

254 $f(x) = |x-1|+4$ $f(-1) =$

255 $f(x) = |x-1|+4$ $f(0) =$

256 $f(x) = |x-1|+4$ $f(1) =$

257 $f(x) = 1000 - x^2$ $f(0) =$

258 $f(x) = 1000 - x^2$ $f(1) =$

259 $f(x) = 1000 - x^2$ $f(31) =$

260 $f(x) = 10{,}000 - x^2$ $f(30) =$

261 $f(x) = 10000 - 2x$ $f(30) =$

262 $f(x) = 50x + 300$ $f(3) =$

263 $f(x) = 50x + 300$ $f(12) =$

264 $f(x) = 2000x + 4000$ $f(12) =$

265 $f(x) = 2000x + 4000$ $f(3) =$

266 $f(x) = 500x + 100$ $f(5) =$ calories

267 $f(x) = 500x + 100$ $f(20) =$ calories

268 $f(x) = -2x + 8$ $f(1) =$

269 $f(x) = -2x + 10$ $f(2) =$

270 $f(x) = .10x^2$ $f(20) =$ mph

271 $f(x) = .10x^2$ $f(30) =$ mph

272 $f(x) = .10x^2$ $f(60) =$ mph

273 $f(x) = 4.9x^2$ $f(5) =$ sec

274 $f(x) = 4.9x^2$ $f(10) =$ sec

275 $f(x) = 4.9x^2$ $f(20) =$ sec

276 $f(x) = \sqrt{\frac{x}{10}}$ $f(40) =$ ft

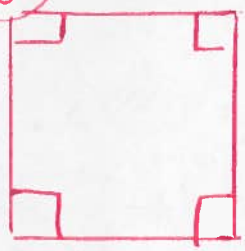
277 $f(x) = \sqrt{\frac{x}{10}}$ $f(90) =$ ft

278 $f(x) = \sqrt{\frac{x}{10}}$ $f(360) =$ ft

279 $f(x) = 1000(1.05)^x$ $f(2) =$

280 $f(x) = 1000(1.04)^x$ $f(2) =$

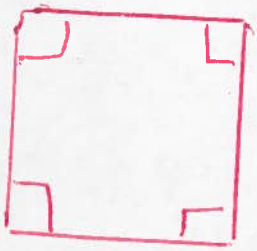
281



area of a square

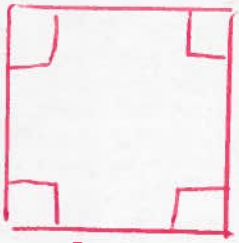
16

282



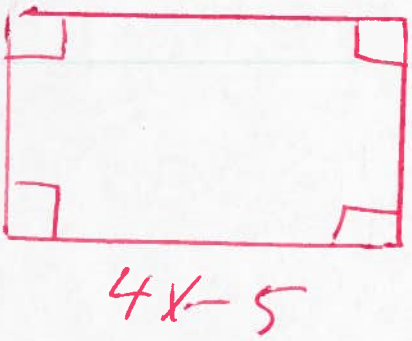
area of a square

283.



area of a square

284.



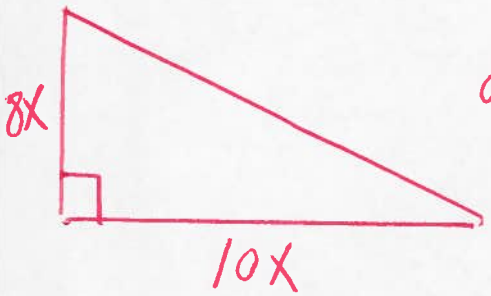
x+3 area of a rectangle

285

area of a rectangle

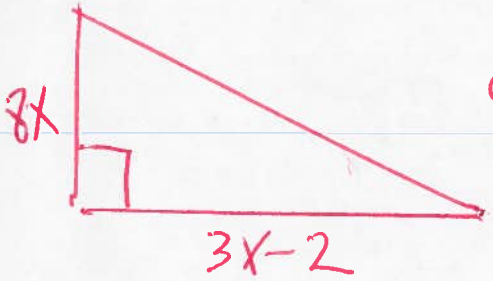
17

286

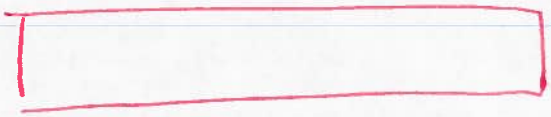


area of a triangle

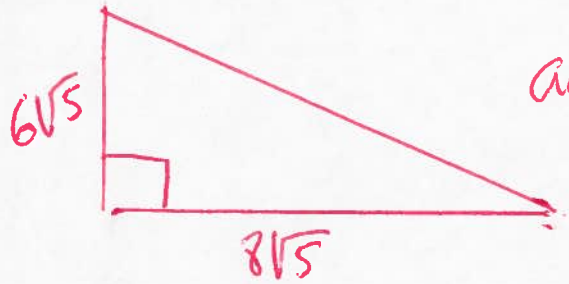
287.



area of a triangle

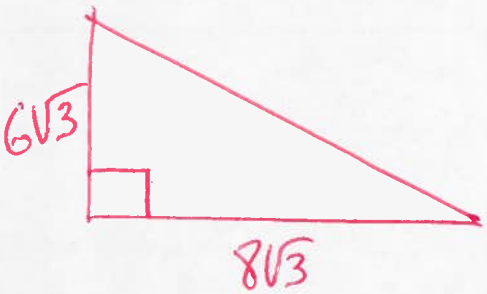


288.



area of a triangle

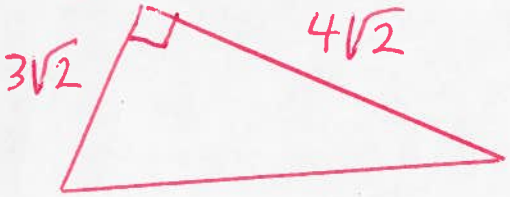
289.



18.

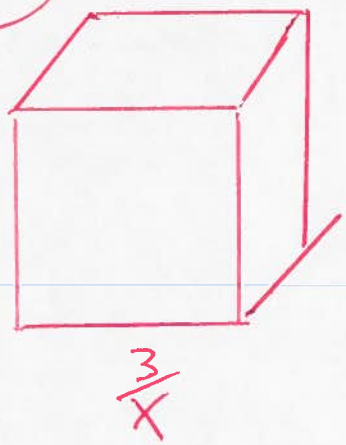
area of a triangle

290



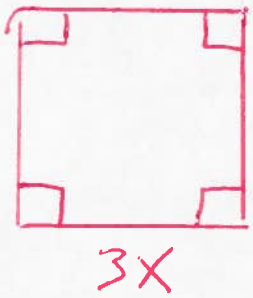
area of a triangle

291



volume of a cube

292.



Find the length of the side of the square if the area is 144.

293. If $a^2+N+8b^2=(a+b)(a+8b)$ then $N=$

294. $8x-12$ Factor GCF

295. x^2+x Factor GCF

296. $4x^2-14x$ Factor GCF

297. $8x^3y^2-4xy^3$ Factor GCF

298. $6x^3y^2z^7-15xy^4z^2$ Factor GCF

299. $x(x-1)+3(x-1)$ Factor GCF

300. $2x(x+5)-7(x+5)$ Factor GCF

301. $5x(a+b)-2(a+b)$ Factor GCF

302. $5x(x+y)-3(x+y)$ Factor GCF

303. $5x(x-y)+2(y-x)$ Factor GCF

304. $-16x^2+64x$ Factor GCF

305. x^2-25 Factor

306. x^2-9 Factor

307. x^2-16 Factor

308. x^2-9y^2 Factor

309. $4x^2-25y^2$ Factor

310. $64x^2-9y^2$ Factor

311. $\frac{25}{64}x^2 - \frac{9}{121}$ Factor

312. $\frac{25x^2}{64} - 9$ Factor

313. $x^2 - 3x - 4$ Factor

314. $x^2 - 2x - 8$ Factor

315. $x^2 + 2x - 8$ Factor

316. $x^2 - 6x + 8$ Factor

317. $x^2 + 6x + 8$ Factor

318. $x^2 + 4x - 12$ Factor

319. $x^2 + 3x - 4$ Factor

320. $2x^2 + 9x - 18$ Factor

321. $6x^2 - 7x - 20$ Factor

322. $3x^2 - 5x + 2$ Factor

323. $2x^2 - 9x + 7$ Factor

324. $64A^2 - 16AB + B^2$ Factor

325. $36x^2 - 12xy + y^2$ Factor

326. $A^2 + 6AB + 5B^2$ Factor

327. $4x^2 - 12xy + 9y^2$ Factor

328 $16x^2 - 24x + 9$ Factor

329. $6A^2 - 3A - 18$ Factor

330. $2x^2 - 32y^2$ Factor

331. $2x^3 - 10x^2 + 12x$ Factor

332 $x^4 - 16$ Factor

333 $x^4 - 1$ Factor

334 $x^2 - 3x - 4 = 0$ Solve

335 $x^2 - 2x - 8 = 0$ Solve

336 $x^2 + 2x - 8 = 0$ Solve

337 $x^2 + 6x + 8 = 0$ Solve

338. $x^2 + 4x - 12 = 0$ Solve

339. $x^2 + 3x = 4$ Solve

340. $x^2 - 12 = -4x$ Solve

341. $x^2 - 9 = 0$ Solve

342 $x^2 - 25 = 0$ Solve

343. $4x^2 - 25 = 0$ Solve $x =$

344. $25x^2 = 64$ Solve $x =$

345. $x^2 = 16$ Solve $x =$

346. $x^2 = 5$ Solve $x =$

347. $\frac{4}{x} = \frac{x}{9}$ Solve $x =$

348. $\frac{1}{x} = \frac{x}{5}$ Solve $x =$

349. $(x-1)^2 + 1 = 5$ Solve $x =$

350. $(x-2)^2 + 2 = 9$ Solve $x =$

351. $(x-1)^2 + 1 = 2$ Solve $x =$

352. $4^2 = 2^k$ Solve $k =$

353. If $f(x) = -16x^2 + 64x$ find $f(x) = 0$

354. $x-1$ is a factor of

I. $x^2 - 1$

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

III. $x^2 + x$

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

355 $\frac{ax+b}{2a+1} = b$ $x =$

356 $(x-1)^2 = 25$ Solve

357 $\sqrt{x-1} = 5$ Solve

358 $\sqrt{x+1} = 4$ Solve

359 $\sqrt{2-x} = 4$ Solve

360 $2(x^2 - 5) = 62$ Solve

361. Find Max
$f(x) = 80 - 16x^2 + 64x$

362. Find Max
$f(x) = -2x^2 + 4x + 6$

363. $x - y = 0$
$x + y = 7$ $x =$

364 $x - y = 6$
$x = 2y$ $y =$

365 $x + 2y = 5$
$x = y$ $y =$

366 $x - 2y = 2$
$x - 2y = 8$ Solve

(367) $x - 2y = 2$
$x + 2y = 6$
Solve

(368.) $2x + 3y = 5$
$4x - 2y = 2$
Solve for x

(369.) $3x + 2y = 5$
$5x + 3y = 8$
Solve for x

(370.) $x + 2y = 2$
$x + 2y = 6$
Solve

(371.) $2x + 4y = 16$ and $(x, y) = (2, y)$ then $y =$

(372) $4x - 3y = 9$ and $(x, y) = (x, 5)$ then $x =$

(373) $(5x^2y^7)^3$ simplify

(374) $(-2x^3y^4)^4$ simplify

(375.) $(-2x^2y^3)(4xy^4)$ simplify

(376.) $(-2x^3y^4)(-2xy)$ simplify

(377.) $\dfrac{40x^3y^4}{15xy^8}$ simplify

(378) $\dfrac{-25x^4y^7z^{11}}{30x^6y^2z^{11}}$ simplify

379. $\frac{x^2-4}{x^2-9} \cdot \frac{x+3}{x-2}$ simplify

380 $\frac{x^2+3x+2}{x^2-9x+20} \div \frac{x^2-4}{x^2-5x}$ simplify

381 $\frac{x+x^2}{x}$ simplify

382 $\frac{2xy+y}{y}$ simplify

383 $\left(\frac{2x}{3y}\right)\left(\frac{27y}{8x^2}\right)$ simplify

384 Graph $y=2x$

385 Graph $y=-2x$

386 Graph $y=\frac{1}{2}x$

387 Graph $y=-\frac{1}{2}x$

388 Graph $y=\frac{3}{2}x$

389 Graph $y=\frac{2}{3}x$

390 Graph $y=x+2$

391 Graph $y=x-2$

392 Graph $y=2x-4$

393 Graph $y = -2x + 4$

394 Graph $y = x^2$

395 Graph $y = -x^2$

396 Graph $y = x^2 - 4$

397 Graph $y = x^2 + 4$

398 Graph $y = (x+1)^2 - 4$

399 Graph $y = -(x+1)^2 + 4$

400 Graph $y = x^2 + 2x - 3$

401 Graph $y = -x^2 - 2x + 3$

402 Graph $y = 2x^2 + 4x - 3$

403 Graph $y = -2x^2 - 4x + 6$

404 Find the equation of the line that contains the points $(0,0)$ and $(1,2)$.

405 Find the equation of the line that contains the points $(0,0)$ and $(1,-2)$.

406 Find the equation of the line that contains the points $(0,0)$ and $(2,1)$.

407 Find the equation of the line that contains the points $(0,0)$ and $(2,-1)$.

408. Find the equation of the line that contains the points $(0,0)$ and $(2,3)$.

(409) Find the equation of the line that contains the points $(0,0)$ and $(3,2)$.

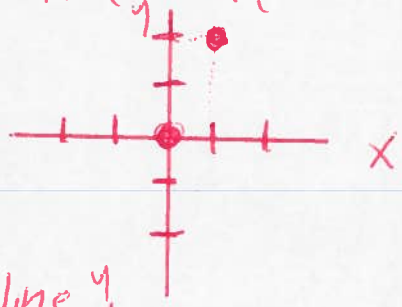
(410) Find the equation of the line that contains the points $(0,2)$ and $(1,3)$.

(411) Find the equation of the line that contains the points $(0,-2)$ and $(1,-1)$.

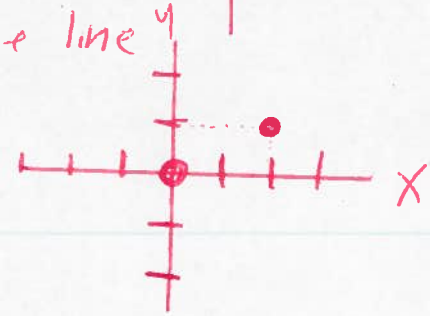
(412) Find the equation of the line that contains the points $(0,-4)$ and $(1,-2)$.

(413) Find the equation of the line that contains the points $(0,4)$ and $(1,2)$.

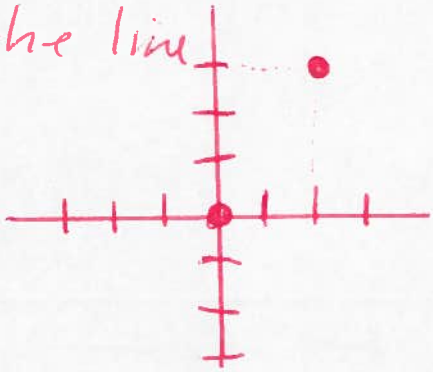
(414) Find the equation of the line that contains the points



(415) Find the equation of the line that contains the points



(416) Find the equation of the line that contains the points



(417) If y varies directly as x and $y = 80$ when $x = 2$ then what is the value of x when $y = 240$?

(418.) y is directly proportional to x and $y = 3$ when $x = 5$. What is the value of y when $x = 15$?

(419.) On a credit card the total repayment y varies directly as the amount charged x. If $y = \$80$ when $x = \$10$ then what is the value of x when $y = \$16{,}000$?

(420) If a box in the shape of a cube has a side of $\frac{5}{x}$ then find the volume.

(421) The probability of head on a coin toss is $\frac{1}{2}$. Find the probability of 2 heads in a row.

(422.) The probability of rain every day is $\frac{1}{4}$. Find the probabilities of no rain in two days in a row.

(423.) If you get m dollars per hour for the first 40 hours and $1\frac{1}{2}$ times for each hour over 40 then how much do you get for 58 hours?

(424.)

If the perimeter is 96 then find the area.

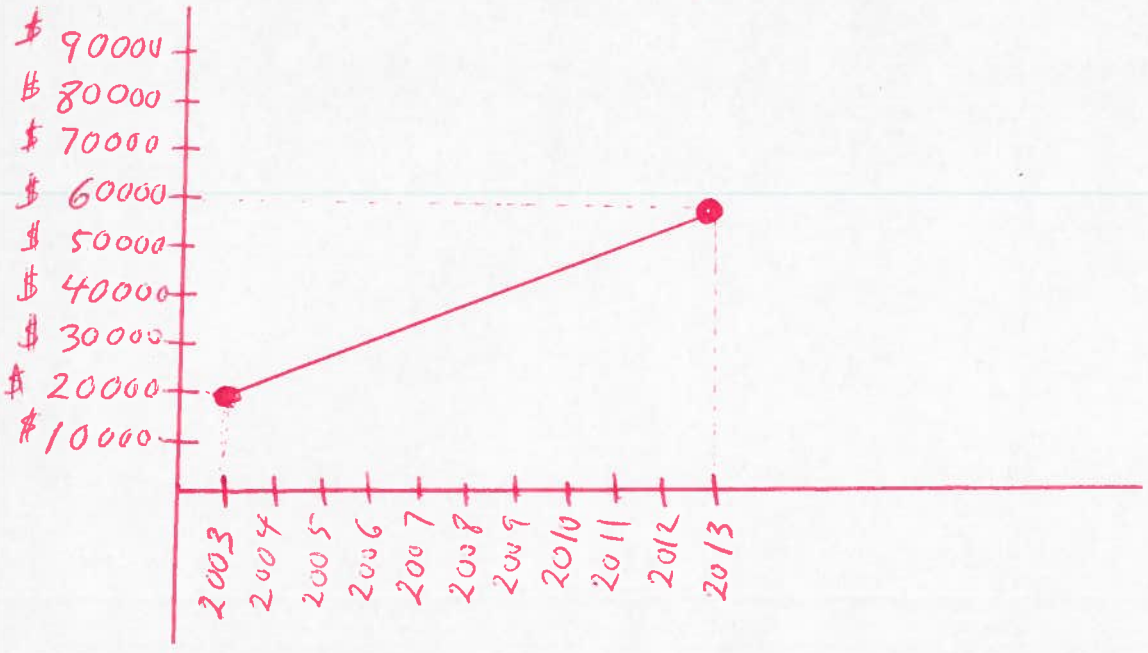
(425.) For t, 89, 87, 83, 60, the median is 83. which number is not possible for t? {45, 62, 74, 88}.

(426.) How many cubical blocks of Lard, each with edges of length 2 inches are needed to fill a rectangular pan with dimensions of 10 inches, 16 inches, and 20 inches?

(427) At a book store a book was on sale for 20% off. If the original price of the book was B, then what is the sale price in terms of B?

(428.) Mike wants to buy a car for 20% off. If Mike also gets a 10% discount for being a member of the navy then what will be the sale price if the original price was C dollars?

(429.) What is the percent increase in tuition at the college from 2003 — 2013?



(430) one hog weighs 40 pounds more than another. If 3 times the weight of the small hog is equal to twice the weight of the large hog then what is the weight of the small hog?

(431) A hog runs at an average speed of 10 miles per hour for t hours and travels m miles. Which formulas are correct for the information?

I $m = 10t$

II $m + t = 10$

III $mt = 10$

IV $\frac{m}{10} = t$

(432) The probability of a prize in a box of candy is 25%. Find the probability that three boxes will have NO prize.

(433) If $f(x) = (x-1)^2 + 1$ and $g(x) = 2$ then find the intersection by graphing.

(434) If $f(x) = |x-2|$ and $g(x) = 4$ then find the intersetion by graphing.

(435) $4x^2 + 12x - 11 = 0$ Use the Quadratic Formula

(436) $4x^2 + 12x - 3 = 0$ Use the Quadratic Formula

(437) $x^2 + 2x + 5 = 0$ Use Quadratic Formula

(438) $2x^2 + 4x + 10 = 0$ Use Quadratic Formula

(439) Evaluate $Pr - r$ if $P = -7$, $r = \frac{1}{8}$

(a) 2 (b) 1

(c) -1 (d) -2

32. TSI

(440) simplify $P - .20P$

(a) $.50P$ (b) $.60P$

(c) $.80P$ (d) $.70P$

(441) Find P if $P = 2(L+W)$, $L = 10$, $W = 6$

(a) $P = 36$ (b) $P = 30$

(c) $P = 32$ (d) $P = 33$

(442) Find y if $y = \sqrt{x+1} + 2$, $x = 3$

(a) $y = 1$ (b) $y = 2$

(c) $y = 4$ (d) $y = 5$

(443) Find y if $y = x^{-2}$, $x = 8$

(a) $y = \frac{1}{16}$ (b) $y = \frac{1}{8}$

(c) $y = \frac{1}{64}$ (d) $y = 64$

(444) Find y if $y = \frac{2}{x} + \frac{3}{x}$, $x = \frac{1}{4}$

(a) $y = 26$ (b) $y = 24$

(c) $y = 20$ (d) $y = 21$

(445) $\frac{x+2}{x} = 17$ then $x =$

(a) $x = \frac{8}{3}$ (b) $x = \frac{3}{8}$

(c) $x = \frac{1}{8}$ (d) $x = 8$

446. $1 + \frac{8}{x} = -3$ then $x =$

(a) $x = -4$ (b) $x = 4$

(c) $x = -2$ (d) $x = 2$

447. $9x - 1 = x$ then $16x =$

(a) $\frac{1}{8}$ (b) 6

(c) 2 (d) 4

448. $7x - 3 = 5x + 4$ then $x =$

(a) $x = \frac{2}{7}$ (b) $x = \frac{-7}{2}$

(c) $x = \frac{7}{2}$ (d) $x = 7$

449. $7x - 3 = 5x - 3$ then $x =$

(a) no solution (b) all real numbers

(c) $x = 0$ (d) $x = -6$

450. $6(x - 2) - 12 = 3x$ then $x =$

(a) $x = -16$ (b) $x = 16$

(c) $x = 8$ (d) $x = -8$

451. $\frac{2}{5x} + \frac{1}{x} = 14$ then $x =$

(a) $x = -10$ (b) $x = -\frac{1}{10}$

(c) $x = \frac{1}{10}$ (d) $x = 10$

452. $-2x + 10 < 30$ Solve for x

(a) $x > 10$ (b) $x < 10$

(c) $x > -10$ (d) $x < -10$

34.

(453) $\frac{x}{5} + \frac{3x}{10} > 20$ Solve for x

(a) $x > -40$ (b) $x < -40$

(c) $x > 40$ (d) $x < 40$

(454) $y = \frac{1}{5}mx^2$ Solve for x

(a) $-\sqrt{5my}$ or $\sqrt{5my}$ (b) $-\sqrt{\frac{m}{5y}}$ or $\sqrt{\frac{m}{5y}}$

(c) $-\sqrt{\frac{5y}{m}}$ or $\sqrt{\frac{5y}{m}}$ (d) $-\sqrt{5m}$ or $\sqrt{5m}$

(455.) If $4x^2 + 14y^2 = m$ then $2x^2 + 7y^2 =$

(a) $3m$ (b) $2m$

(c) $\frac{m}{2}$ (d) $\frac{m}{3}$

(456.) $f(x) = \frac{x+1}{x-4}$ find $f(1)$

(a) $f(1) = -\frac{3}{2}$ (b) $f(1) = \frac{3}{2}$

(c) $f(1) = -\frac{2}{3}$ (d) $f(1) = \frac{2}{3}$

(457) $f(x) = \frac{x-1}{x^2-4}$ find $f(2)$

(a) $f(2) = 1$ (b) $f(2) = -1$

(c) undefined (d) $f(2) = 0$

(458) $f(x) = |x-1| + 4$ find $f(0)$

(a) $f(0) = 3$ (b) $f(0) = 4$

(c) $f(0) = 5$ (d) $f(0) = 6$

459. Find the area of a square with side $= 6x - y$

(a) $36x^2 + 12xy + y^2$ (b) $36x^2 + y^2$

(c) $36x^2 - 12xy + y^2$ (d) $36x^2 - y^2$

35.

460. $x^2 - 4 = 3x$ then $x =$

(a) $\{1, 4\}$ (b) $\{-1, -4\}$

(c) $\{-1, 4\}$ (d) $\{1, -4\}$

461. $\sqrt{x} + 2 = 9$ then $x =$

(a) $x = -7$ (b) $x = -49$

(c) $x = 49$ (d) $x = 7$

462. $-8x(x-2) = 0$ then $x =$

(a) $\{8, 2\}$ (b) $\{-8, -2\}$

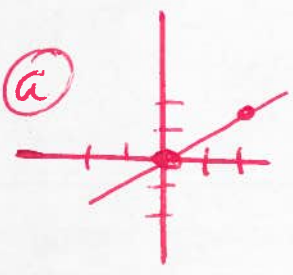
(c) $\{0, 2\}$ (d) $\{0, -2\}$

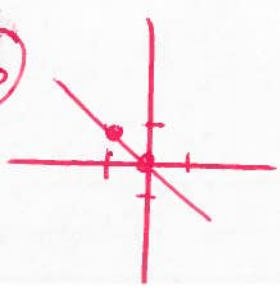
463. If $4x + y = 2$ and $(-2, Q)$ is a solution then $Q =$

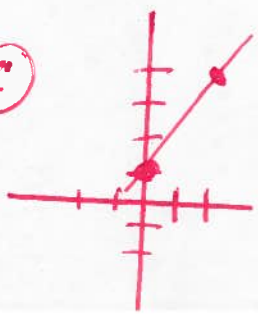
(a) $Q = -5$ (b) $Q = 5$

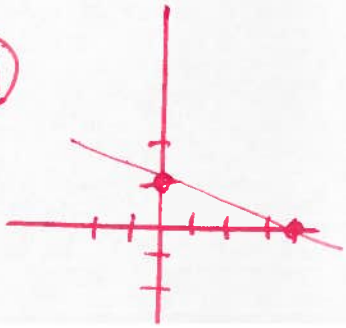
(c) $Q = 10$ (d) $Q = -10$

464. Graph $y = \frac{3}{2}x + 1$

(a) 

(b) 

(c) 

(d) 

(465) $\frac{2}{x} + a = \frac{2}{b}$ then $x =$

(a) $x = \frac{ab-2}{-2b}$ (b) $x = \frac{ab-2}{2b}$

(c) $x = \frac{-2b}{ab-2}$ (d) $x = \frac{2b}{ab-2}$

36.

(466) If $8x^2 + 40 = m$ then $x^2 + 5 =$ terms of m

(a) $8m$ (b) $-\frac{m}{8}$

(c) $\frac{m}{8}$ (d) $-8m$

(467) Find V if $V = \pi r^2 h$, $r = 2a$, $h = 3a+2$

(a) $12a^2\pi + 8a\pi$ (b) $12a^2\pi - 8a\pi$

(c) $12a^3\pi + 8a^2\pi$ (d) $12a^3\pi - 8a^2\pi$

(468) Find the area of a rectangle with length $= 5x+3y$ and width $= 5x-3y$

(a) $25x^2 + 30xy - 9y^2$ (b) $25x^2 - 30xy - 9y^2$

(c) $25x^2 - 9y^2$ (d) $25x^2 + 9y^2$

(469) If $a^2 + N + 8b^2 = (a+b)(a+8b)$ then $N =$

(a) $N = 6ab$ (b) $N = 7ab$

(c) $N = 9ab$ (d) $N = 8ab$

(470) $6x^3y^2z^7 - 15xy^4z^2$ factor GCF (37)

(a) $3xyz(2x^2z^5 - 5y^2)$ (b) $3xy(2x^2z^5 - 5y^2)$

(c) $3xy^2z^2(2x^2z^5 - 5y^2)$ (d) $3xy^2z^2(2x^2z^5 + 5y^2)$

(471) $\frac{25x^2}{64} - \frac{9}{121}$ Factor

(a) $\left(\frac{5x}{8} + \frac{3}{11}\right)\left(\frac{5x}{8} - \frac{3}{11}\right)$ (b) $\left(\frac{5x}{8} + \frac{3}{11}\right)\left(\frac{5x}{8} + \frac{3}{11}\right)$

(c) $\left(\frac{5x}{8} + \frac{3}{11}\right)\left(\frac{5x}{8} - \frac{3}{11}\right)$ (d) $\left(\frac{5x}{8} - \frac{3}{11}\right)\left(\frac{5x}{8} - \frac{3}{11}\right)$

(472) $2x^2 + 9x - 18$ Factor

(a) $(2x-3)(x-6)$ (b) $(2x+3)(x+6)$

(c) $(2x-3)(x+6)$ (d) $(2x+3)(x-6)$

(473) $2x^2 - 32y^2$ factor

(a) $4(x+4y)(x-4y)$ (b) $2(x+4y)(x+4y)$

(c) $2(x+4y)(x-4y)$ (d) $2(x-4y)(x-4y)$

(474) $x^2 + 2x - 8 = 0$ $x =$

(a) $\{1, -8\}$ (b) $\{-2, 4\}$

(c) $\{-4, 2\}$ (d) $\{1, -3\}$

38.

475. $(x+1)^2+1=5$ then $x=$

(a) $\{1, 5\}$ (b) $\{-1, -3\}$

(c) $\{-1, 3\}$ (d) $\{1, -3\}$

476. $(x-2)^2+2=9$ then $x=$

(a) $\{-2, -7\}$ (b) $\{-2-\sqrt{7}, -2+\sqrt{7}\}$

(c) $\{2-\sqrt{7}, 2+\sqrt{7}\}$ (d) $\{2, 7\}$

477. $\sqrt{2-x}=4$ then $x=$

(a) $x=6$ (b) $x=14$

(c) $x=-14$ (d) $x=-7$

478. $f(x)=80-16x^2+64x$ find max

(a) max $=140$ (b) max $=12$

(c) max $=144$ (d) max $=244$

479. $3x+2y=5$ solve for x and y

$5x+3y=8$

(a) $(x, y)=(-1, -1)$ (b) $(x, y)=(1, 2)$

(c) $(x, y)=(1, 1)$ (d) $(x, y)=(1, -1)$

480 $\left(\frac{2x}{3y}\right)\left(\frac{27y}{8x^2}\right)$ simplify

(a) $-\frac{9}{4x}$ (b) $\frac{9x}{4}$

(c) $\frac{9}{4x}$ (d) $\frac{3}{4x}$

481 $\frac{2xy+y}{y}$ simplify

(a) $2x-1$ (b) $2x+y$

(c) $2x+1$ (d) $2x$

482 $(5x^2y^7)^3$ simplify

(a) $125x^7y^{22}$ (b) $5x^6y^{21}$

(c) $125x^6y^{21}$ (d) $25x^6y^{21}$