Answers to

1) $a^2 + 4a - 1$
2) $3n + 6$
3) $-x^3 - 7x - 3$
4) $2n^2 - 3n + 3$
5) $3n^3 + 5n - 3$
6) $x^3 + 3x^2 - 2x + 4$
7) $n^2 + 2n - 7$
8) $a^3 + 3a^2 + 2a - 4$
9) -1
10) $a^2 + 4a - 3$
11) $-4x^3 + 12x$
12) $3x^4 + 3x^3 - 6x - 6$
13) $-3t^3 - 9t^2 + 12t$
14) $-a^3 - 7a^2 - 10a$
15) $4a^3 + 2a^2 + 4a + 2$
16) $-a^2 + a + 12$
17) $-8a^3 - 16a^2 - 8a$
18) $3n^3 - 4n^2 + 12n - 16$
19) $3a^3 - 2a^2 - 12a + 8$
20) $a^3 - 2a^2 - 4a + 8$
21) -1
22) $\frac{x^2 + 5}{3x + 3}$
23) $\frac{t^2 - 4t}{t - 2}$
24) $\frac{x^2}{2}$
25) $\frac{4n + 3}{-2n^2 - 2n}$
26) $\frac{t^3 + t^2}{t + 4}$
27) 3
28) $\frac{-3n^3 + 5n}{2n + 3}$
29) $\frac{2x - 5}{x + 2}$
30) $\frac{3x + 2}{x^3 - 4}$
31) $3n^3 - 9n^2 - 6n + 6$
32) $28x - 8$
33) $-20n - 21$
34) $5n^3 + 4n - 5$
35) $3n^3 + 12n + 18$
36) $3n^2 - 9n - 18$
37) $-14n - 19$
38) $-8t^3 - 16t^2 - 12t - 20$
39) $-3n$
40) $-5x^3 - 24x - 4$
41) $-4t^3 - 8t^2 + 2$
42) $12a + 7$
43) $-3x^3 + x^2 - 4$
44) $3a^2 + 11$
45) $3x^3 + 15x^2 - 5$
46) $4t^2 + 13$
47) $9x^2 - 12x + 3$
48) $4x - 11$
49) $2a^3 - 10a + 2$
50) $27x^2 + 90x + 78$
51) $8n^3 - 36n^2 + 54n - 26$
52) $-27x^2 + 3$
53) $x + 5$
54) $4n + 6$
55) $16t - 9$
56) $2t - 2$
57) $4x + 2$
58) $-3n^3 - 27n^2 - 81n - 80$
59) $x^2 + 2$
60) $4x^2 - 19$
61) 4
62) -42
63) 78
64) 2
65) -39
66) -70
67) 56
68) 52
69) 1
70) 0
71) $-\frac{13}{23}$
72) 39
73) -30
74) $\frac{41}{44}$
75) -10
76) 3
77) 8
78) 2
79) -5
80) -4
81) $g^{-1}(x) = \frac{-5 - 3x}{5}$
82) $f^{-1}(n) = -n - 1$
83) $g^{-1}(x) = \frac{x - 3}{3}$
84) $h^{-1}(n) = \frac{-20 - n}{5}$
85) $g^{-1}(x) = \frac{-3x - 7}{2}$
86) $g^{-1}(x) = -1 - \frac{4}{3}x$
87) $g^{-1}(n) = \frac{-2n - 2}{5}$
88) $f^{-1}(n) = -\frac{1}{4}n - \frac{3}{4}$
89) $f^{-1}(x) = \frac{15 + 4x}{3}$
90) $g^{-1}(n) = -4n - 4$
91) $f^{-1}(x) = 3x - 1$
92) $g^{-1}(x) = 3x - 9$
93) $g^{-1}(x) = -\frac{2}{3}x + \frac{4}{3}$
94) $g^{-1}(n) = -3n - 5$
95) $h^{-1}(x) = x + 2$
96) $f^{-1}(x) = -\frac{4}{3}x$
97) $g^{-1}(x) = \frac{-12 + x}{3}$
98) $f^{-1}(x) = \frac{-3x - 15}{10}$
99) $g^{-1}(x) = \frac{-15 - 3x}{5}$
100) $f^{-1}(x) = 2 - \frac{2}{5}x$
101) $f^{-1}(x) = -2x^5 + 3$
102) $f^{-1}(n) = 2n^3 - 3$
103) $g^{-1}(n) = (n + 1)^5 + 2$
104) $f^{-1}(n) = (n - 2)^3$
105) $h^{-1}(x) = \sqrt[3]{\frac{x + 3}{2}}$
106) $f^{-1}(n) = (n + 1)^5 + 1$
107) $g^{-1}(x) = x^3 - 1$
108) $g^{-1}(x) = 2x^5$
109) $g^{-1}(x) = \frac{4 + \sqrt[5]{16x}}{2}$
110) $f^{-1}(x) = -2x^3$
111) $g^{-1}(x) = (x - 2)^5$
112) $g^{-1}(n) = n^5$
113) $g^{-1}(x) = \sqrt[3]{\frac{-x - 1}{2}}$
114) $g^{-1}(n) = -3 - 2n^3$
115) $f^{-1}(x) = \sqrt[3]{-\frac{x}{2}}$

116) $g^{-1}(x) = \dfrac{-2 + \sqrt[3]{4x}}{2}$

117) $g^{-1}(n) = 1 - 2n^3$

118) $g^{-1}(n) = (n+1)^3$

119) $g^{-1}(x) = -3 + (x-2)^3$

120) $g^{-1}(x) = \sqrt[3]{\dfrac{-x+1}{2}}$

121) $f^{-1}(x) = -\dfrac{3}{x-2} + 2$

122) $g^{-1}(x) = \dfrac{1}{x-1} - 2$

123) $g^{-1}(x) = -\dfrac{4}{x-2} + 1$

124) $g^{-1}(x) = -\dfrac{2}{x}$

125) $f^{-1}(n) = \dfrac{4}{n} - 1$

126) $g^{-1}(n) = \dfrac{2}{-n+2} + 2$

127) $f^{-1}(x) = \dfrac{3}{x-1} - 1$

128) $h^{-1}(x) = -\dfrac{4}{x-1} + 1$

129) $g^{-1}(n) = -\dfrac{3}{n+2} + 2$

130) $g^{-1}(x) = -\dfrac{2}{-x-2} + 2$

131) $f^{-1}(n) = \dfrac{2}{n+3}$

132) $f^{-1}(x) = \dfrac{4}{x-2} - 2$

133) $g^{-1}(x) = -\dfrac{3}{x+1} - 3$

134) $f^{-1}(x) = -\dfrac{2}{x+1} + 3$

135) $f^{-1}(x) = \dfrac{1}{x-2} - 3$

136) $f^{-1}(n) = -\dfrac{2}{-n-2}$

137) $f^{-1}(x) = \dfrac{2}{x} - 3$

138) $g^{-1}(x) = \dfrac{1}{-x+1} + 2$

139) $g^{-1}(n) = \dfrac{1}{n-2} - 1$

140) $g^{-1}(x) = -\dfrac{3}{x+3} + 1$

141) $g^{-1}(x) = \dfrac{5x+5}{x-1}$

142) $g^{-1}(x) = \dfrac{7}{x+2}$

143) $f^{-1}(x) = \dfrac{9x-1}{x+7}$

144) $g^{-1}(x) = \dfrac{5x+4}{2x-1}$

145) Yes

146) Yes

147) No

148) No

149) No

150) Yes

151) No

152) Yes

153) No

154) Yes

155) No

156) No

157) Yes

158) Yes

159) Yes

160) Yes

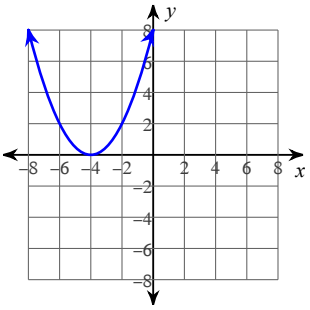
161) Yes

162) No

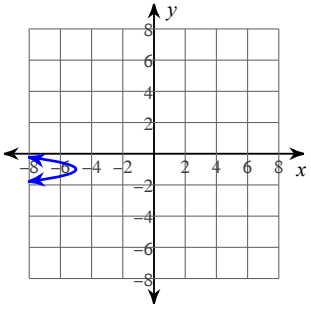
163) No

164) Yes

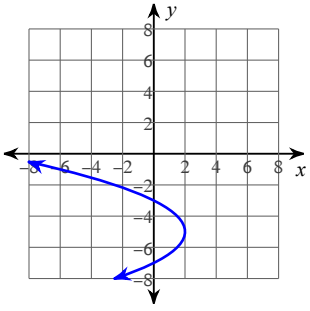
165)



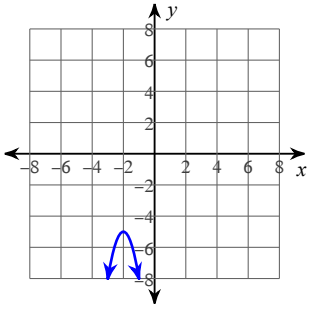
166)



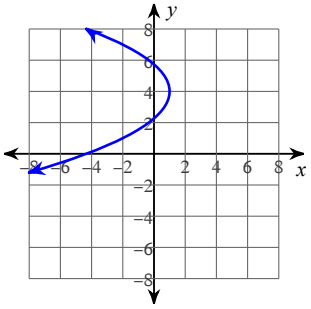
167)



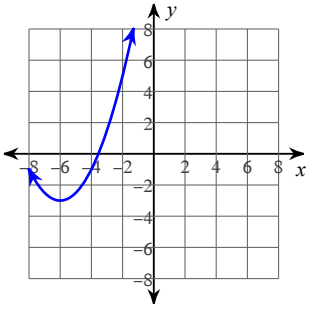
168)



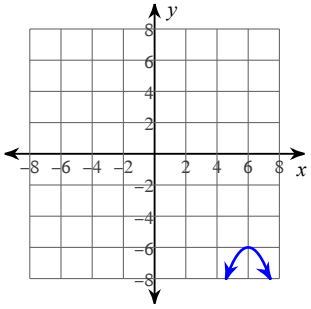
169)



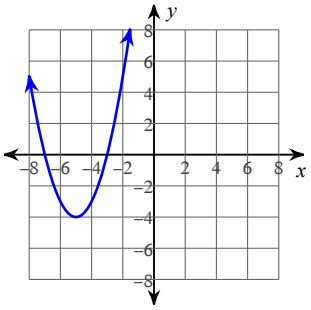
170)



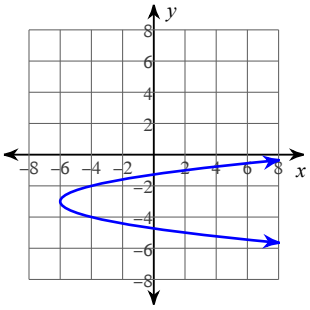
171)



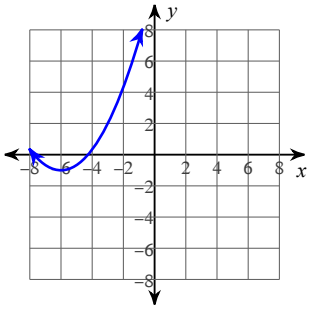
172)



173)



174)



175) $y = -5(x-8)^2 + 4$

176) $y = -\frac{1}{3}x^2 - 8$

177) $x = -2(y+6)^2 + 9$

178) $x = -\frac{1}{2}y^2 + 4$

179) $x = -3(y-10)^2 + 1$

180) $y = -(x-1)^2 + 9$

181) $y = -8(x-3)^2 + 3$

182) $y = -8(x-8)^2 + 4$

183) $x = -2(y-10)^2 - 5$

184) $x = \frac{3}{4}(y+9)^2 - 10$

185) $x = -y^2 - 4$

186) $y = -\frac{1}{4}(x-10)^2 - 3$

187) $x = -(y-10)^2 + 1$

188) $x = -(y-6)^2 + 9$

189) $y = (x-3)^2 + 4$

190) $x = \frac{1}{4}(y-3)^2 + 1$

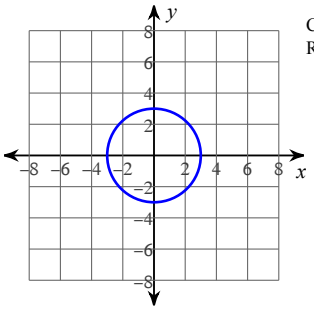
191) $x = 5(y-10)^2 - 6$

192) $y = \frac{1}{4}(x+2)^2 - 5$

193) $x = -4(y-3)^2 - 10$

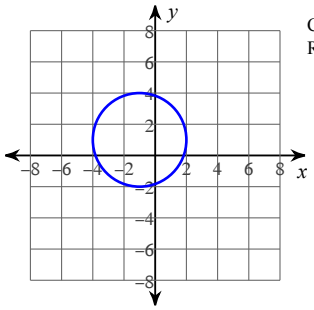
194) $x = 2(y+7)^2 - 5$

195)



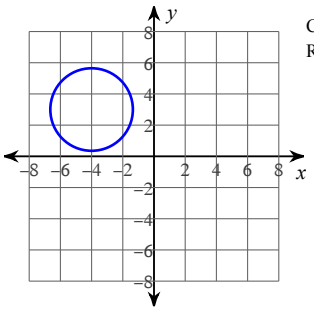
Center: $(0, 0)$
Radius: 3

196)



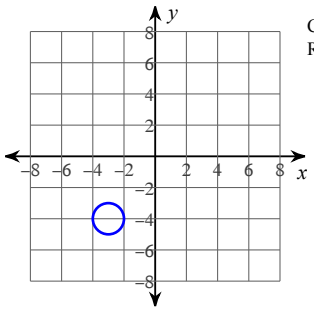
Center: $(-1, 1)$
Radius: 3

197)



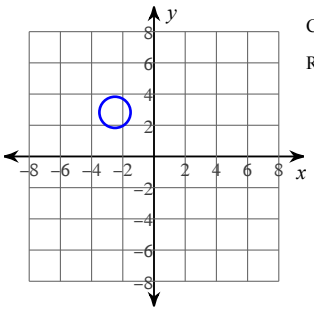
Center: $(-4, 3)$
Radius: $\sqrt{7}$

198)



Center: $(-3, -4)$
Radius: 1

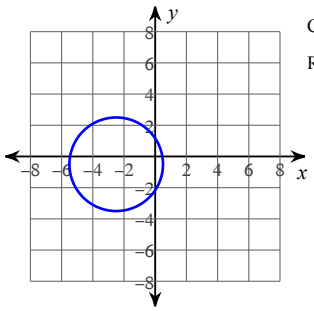
199)



Center: $\left(-\frac{5}{2}, 2\sqrt{2}\right)$

Radius: 1

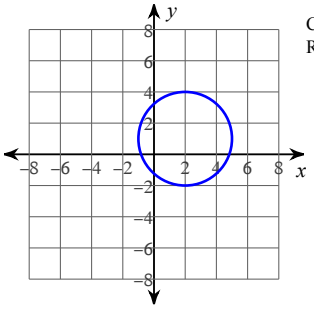
200)



Center: $\left(-\frac{5}{2}, -\frac{1}{2}\right)$

Radius: 3

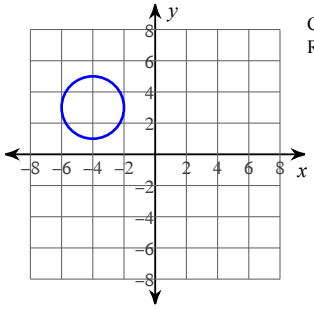
201)



Center: $(2, 1)$

Radius: 3

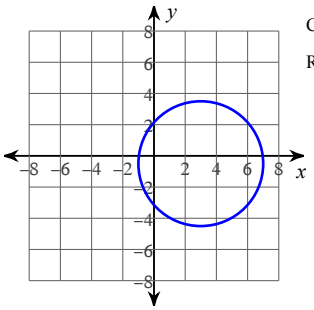
202)



Center: $(-4, 3)$

Radius: 2

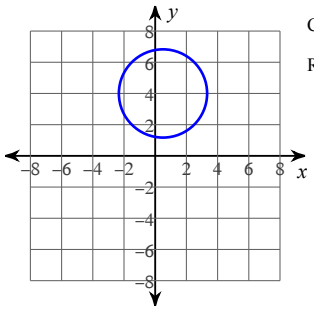
203)



Center: $\left(3, -\frac{1}{2}\right)$

Radius: 4

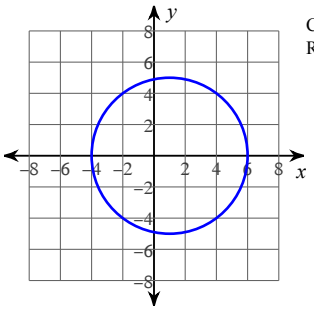
204)



Center: $\left(\frac{1}{2}, 4\right)$

Radius: $2\sqrt{2}$

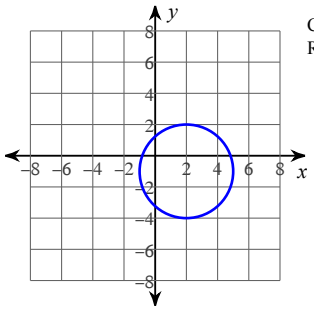
205)



Center: $(1, 0)$

Radius: 5

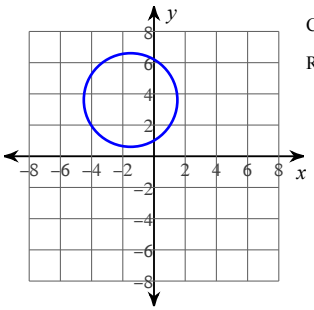
206)



Center: $(2, -1)$

Radius: 3

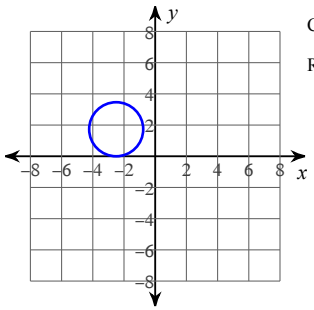
207)



Center: $\left(-\frac{3}{2}, \sqrt{13}\right)$

Radius: 3

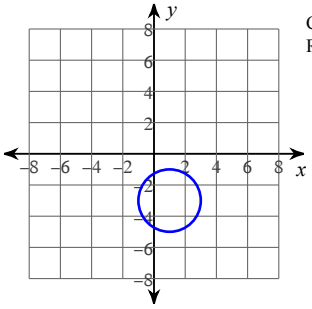
208)



Center: $\left(-\frac{5}{2}, \sqrt{3}\right)$

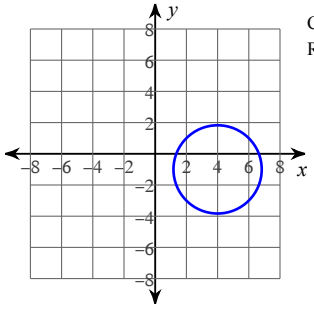
Radius: $\sqrt{3}$

209)



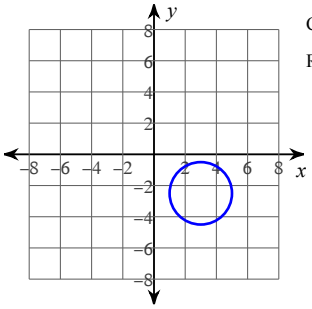
Center: $(1, -3)$
Radius: 2

210)



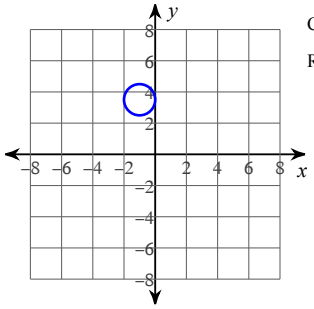
Center: $(4, -1)$
Radius: $2\sqrt{2}$

211)



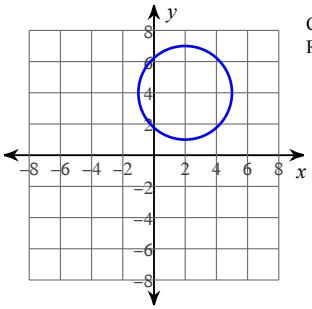
Center: $\left(3, -\frac{5}{2}\right)$
Radius: 2

212)



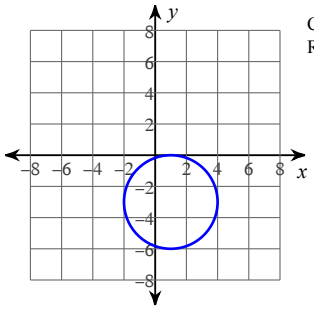
Center: $\left(-1, \frac{7}{2}\right)$
Radius: 1

213)



Center: $(2, 4)$
Radius: 3

214)



Center: $(1, -3)$
Radius: 3

215) $(x-16)^2+(y+10)^2=4$

216) $(x-11)^2+(y+4)^2=36$

217) $(x+15)^2+\left(y-\frac{1}{2}\right)^2=16$

218) $\left(x-4\sqrt{11}\right)^2+(y+13)^2=4$

219) $\left(x+\frac{13}{2}\right)^2+\left(y-\frac{1}{2}\right)^2=100$

220) $(x+2)^2+(y-7)^2=41$

221) $(x+5)^2+(y+11)^2=5$

222) $(x-13)^2+(y+6)^2=36$

223) $(x+5)^2+(y+4)^2=1$

224) $(x+14)^2+(y+14)^2=4$

225) $(x-4)^2+(y-13)^2=19$

226) $(x-10)^2+(y-4)^2=81$

227) $(x+2)^2+(y+9)^2=100$

228) $(x-15)^2+(y-6)^2=16$

229) $(x+9)^2+(y-12)^2=16$

230) $(x-13)^2+(y+10)^2=31$

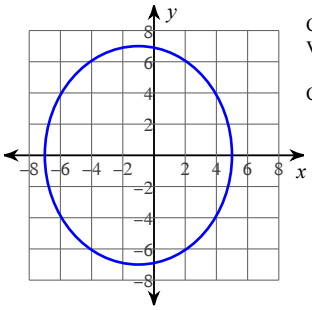
231) $(x-4)^2+(y-13)^2=9$

232) $(x+10)^2+(y-14)^2=17$

233) $x^2+(y-15)^2=1$

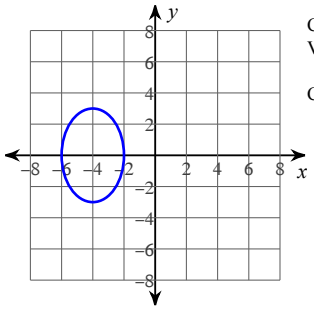
234) $x^2+(y-15)^2=9$

235)



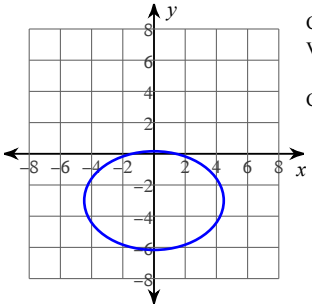
Center: $(-1, 0)$
Vertices: $(-1, 7)$
$(-1, -7)$
Co-vertices: $(5, 0)$
$(-7, 0)$

236)



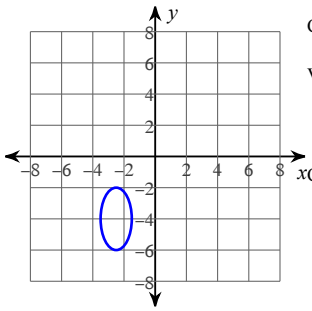
Center: $(-4, 0)$
Vertices: $(-4, 3)$
$(-4, -3)$
Co-vertices: $(-2, 0)$
$(-6, 0)$

237)



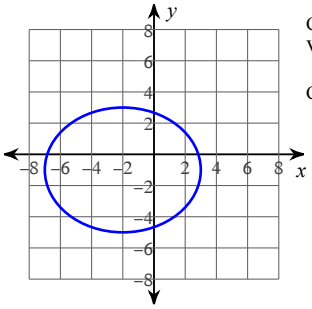
Center: $(0, -3)$
Vertices: $(2\sqrt{5}, -3)$
$(-2\sqrt{5}, -3)$
Co-vertices: $(0, -3 + \sqrt{10})$
$(0, -3 - \sqrt{10})$

238)



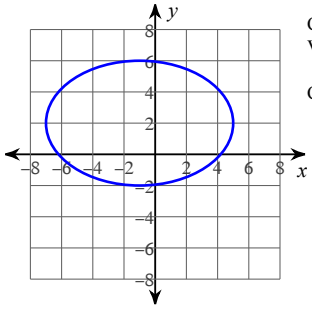
Center: $\left(-\frac{5}{2}, -4\right)$
Vertices: $\left(-\frac{5}{2}, -2\right)$
$\left(-\frac{5}{2}, -6\right)$
Co-vertices: $\left(-\frac{3}{2}, -4\right)$
$\left(-\frac{7}{2}, -4\right)$

239)



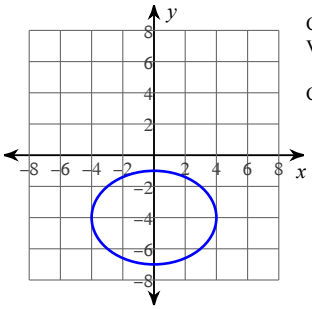
Center: $(-2, -1)$
Vertices: $(3, -1)$
$(-7, -1)$
Co-vertices: $(-2, 3)$
$(-2, -5)$

240)



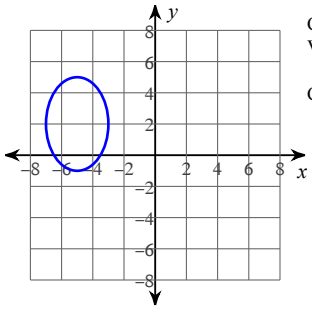
Center: $(-1, 2)$
Vertices: $(5, 2)$
$(-7, 2)$
Co-vertices: $(-1, 6)$
$(-1, -2)$

241)



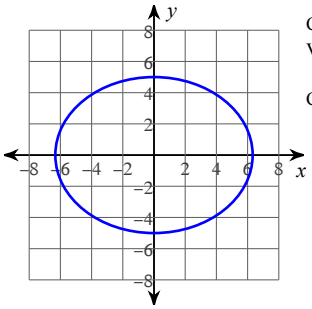
Center: $(0, -4)$
Vertices: $(4, -4)$
$(-4, -4)$
Co-vertices: $(0, -1)$
$(0, -7)$

242)



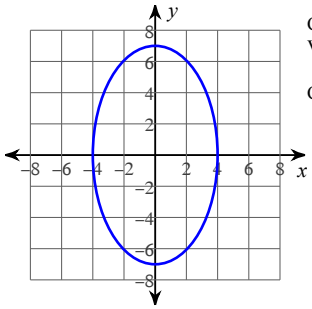
Center: $(-5, 2)$
Vertices: $(-5, 5)$
$(-5, -1)$
Co-vertices: $(-3, 2)$
$(-7, 2)$

243)



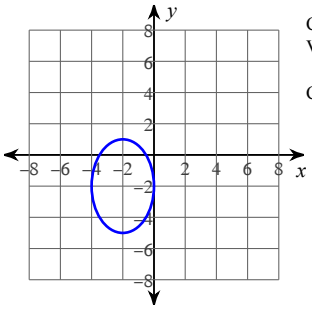
Center: $(0, 0)$
Vertices: $(2\sqrt{10}, 0)$
$(-2\sqrt{10}, 0)$
Co-vertices: $(0, 5)$
$(0, -5)$

244)



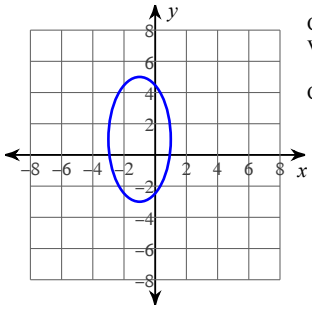
Center: $(0, 0)$
Vertices: $(0, 7)$
$(0, -7)$
Co-vertices: $(4, 0)$
$(-4, 0)$

245)



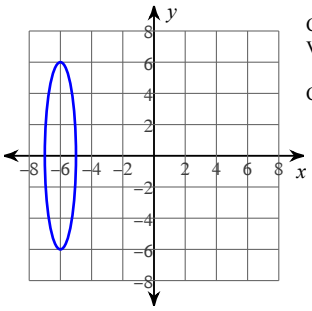
Center: $(-2, -2)$
Vertices: $(-2, 1)$
$(-2, -5)$
Co-vertices: $(0, -2)$
$(-4, -2)$

246)



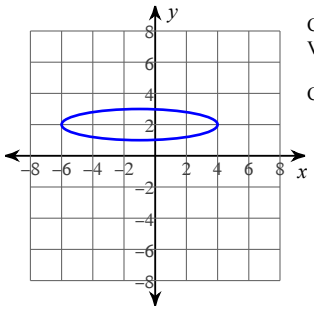
Center: $(-1, 1)$
Vertices: $(-1, 5)$
$(-1, -3)$
Co-vertices: $(1, 1)$
$(-3, 1)$

247)



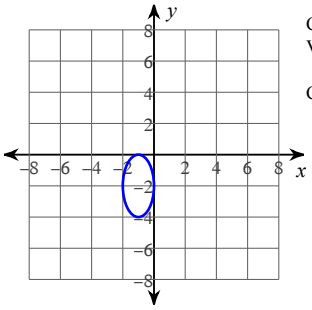
Center: $(-6, 0)$
Vertices: $(-6, 6)$
$(-6, -6)$
Co-vertices: $(-5, 0)$
$(-7, 0)$

248)



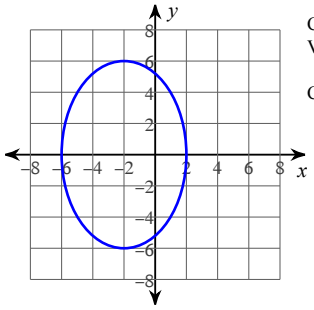
Center: $(-1, 2)$
Vertices: $(4, 2)$
$(-6, 2)$
Co-vertices: $(-1, 3)$
$(-1, 1)$

249)



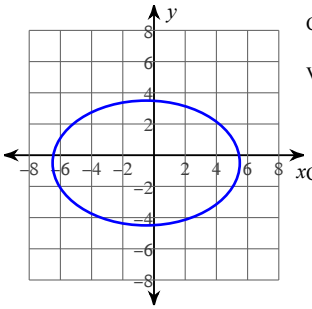
Center: $(-1, -2)$
Vertices: $(-1, 0)$
$(-1, -4)$
Co-vertices: $(0, -2)$
$(-2, -2)$

250)



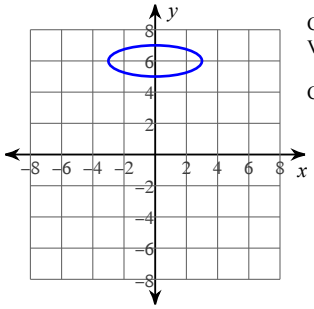
Center: $(-2, 0)$
Vertices: $(-2, 6)$
$(-2, -6)$
Co-vertices: $(2, 0)$
$(-6, 0)$

251)



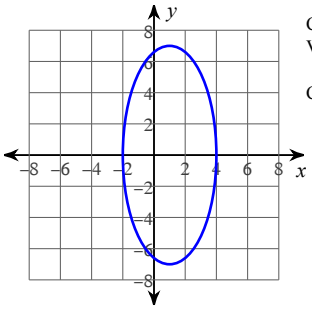
Center: $\left(-\frac{1}{2}, -\frac{1}{2}\right)$
Vertices: $\left(\frac{11}{2}, -\frac{1}{2}\right)$
$\left(-\frac{13}{2}, -\frac{1}{2}\right)$
Co-vertices: $\left(-\frac{1}{2}, \frac{7}{2}\right)$
$\left(-\frac{1}{2}, -\frac{9}{2}\right)$

252)



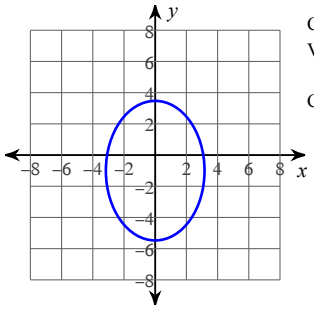
Center: $(0, 6)$
Vertices: $(3, 6)$
$(-3, 6)$
Co-vertices: $(0, 7)$
$(0, 5)$

253)



Center: $(1, 0)$
Vertices: $(1, 7)$
$(1, -7)$
Co-vertices: $(4, 0)$
$(-2, 0)$

254)



Center: $(0, -1)$
Vertices: $(0, -1 + 2\sqrt{5})$
$(0, -1 - 2\sqrt{5})$
Co-vertices: $(\sqrt{10}, -1)$
$(-\sqrt{10}, -1)$

255) $\frac{(x-6)^2}{25} + \frac{(y+4)^2}{4} = 1$

256) $\frac{(x+2)^2}{81} + \frac{(y+5)^2}{16} = 1$

257) $\frac{(x+9)^2}{16} + \frac{(y+8)^2}{121} = 1$

258) $\frac{(x-5)^2}{64} + \frac{(y+2)^2}{121} = 1$

259) $\frac{(x-4)^2}{121} + \frac{(y+8)^2}{64} = 1$

260) $\frac{(x+2)^2}{100} + \frac{(y-3)^2}{49} = 1$

261) $\frac{(x+1)^2}{121} + \frac{(y+3)^2}{100} = 1$

262) $\frac{(x-8)^2}{25} + \frac{(y-2)^2}{36} = 1$

263) $\frac{(x+5)^2}{225} + \frac{(y-5)^2}{81} = 1$

264) $\frac{(x+7)^2}{4} + \frac{(y+9)^2}{16} = 1$

265) $\frac{(x+1)^2}{25} + \frac{(y-9)^2}{81} = 1$

266) $\frac{(x+2)^2}{100} + \frac{(y-5)^2}{121} = 1$

267) $\frac{x^2}{16} + \frac{(y-4)^2}{64} = 1$

268) $\frac{(x+3)^2}{144} + \frac{(y-3)^2}{4} = 1$

269) $\frac{(x-4)^2}{125} + \frac{(y-9)^2}{55} = 1$

270) $\frac{\left(x+\frac{5}{2}\right)^2}{144} + \frac{(y+7)^2}{64} = 1$

271) $\frac{(x-7)^2}{49} + \frac{(y-2)^2}{225} = 1$

272) $\frac{(x+2)^2}{169} + \frac{(y-5)^2}{64} = 1$

273) $\frac{(x-1)^2}{81}+\frac{(y+5)^2}{9}=1$

274) $\frac{(x-6)^2}{115}+\frac{(y+2)^2}{75}=1$

275) $\frac{(x+3)^2}{49}+\frac{(y-4)^2}{196}=1$

276) $\frac{(x-7)^2}{9}+\frac{(y+2)^2}{36}=1$

277) $\frac{(x+10)^2}{100}+\frac{(y-3)^2}{64}=1$

278) $\frac{(x-5)^2}{81}+\frac{(y+3)^2}{36}=1$

279) $\frac{(x+2)^2}{36}+\frac{(y+10)^2}{81}=1$

280) $\frac{\left(x+\frac{15}{2}\right)^2}{60}+\frac{\left(y+\frac{7}{2}\right)^2}{75}=1$

281) $\frac{(x-6)^2}{16}+\frac{(y+5)^2}{144}=1$

282) $\frac{x^2}{25}+\frac{(y-4)^2}{16}=1$

283) $\frac{(x+6)^2}{144}+\frac{(y+5)^2}{36}=1$

284) $\frac{(x+8)^2}{144}+\frac{(y+4)^2}{36}=1$

285) $\frac{(x-3)^2}{144}+\frac{(y-2)^2}{36}=1$

286) $\frac{(x-4)^2}{100}+\frac{(y-8)^2}{64}=1$

287) $\frac{x^2}{16}+\frac{(y-5)^2}{100}=1$

288) $\frac{(x+7)^2}{25}+\frac{(y-4)^2}{100}=1$

289) $\frac{(x-4)^2}{20}+\frac{(y-1)^2}{115}=1$

290) $\frac{x^2}{144}+\frac{(y-5)^2}{36}=1$

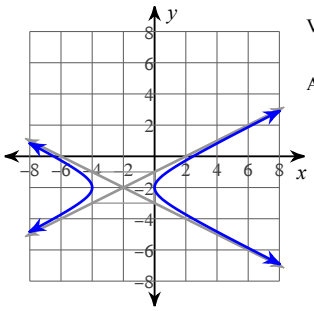
291) $\frac{(x+8)^2}{90}+\frac{(y-2)^2}{5}=1$

292) $\frac{(x+4)^2}{4}+\frac{(y+7)^2}{36}=1$

293) $\frac{(x-6)^2}{64}+\frac{(y-4)^2}{36}=1$

294) $\frac{(x-5)^2}{49}+\frac{y^2}{9}=1$

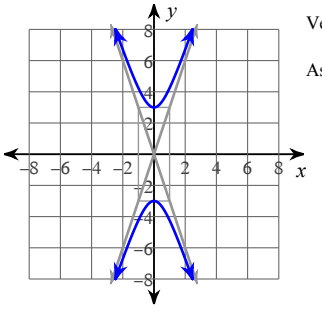
295)



Vertices: $(0,-2)$, $(-4,-2)$

Asym.: $y=\frac{1}{2}x-1$, $y=-\frac{1}{2}x-3$

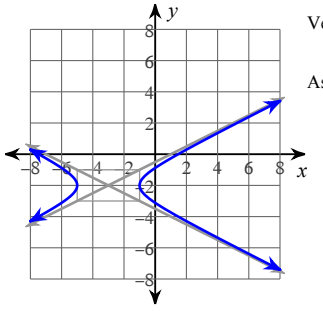
296)



Vertices: $(0,3)$, $(0,-3)$

Asym.: $y=3x$, $y=-3x$

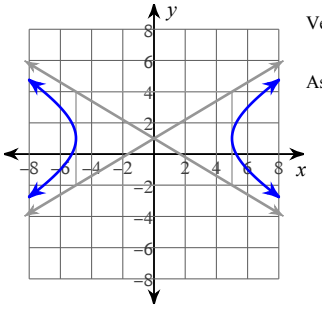
297)



Vertices: $(-1,-2)$, $(-5,-2)$

Asym.: $y=\frac{1}{2}x-\frac{1}{2}$, $y=-\frac{1}{2}x-\frac{7}{2}$

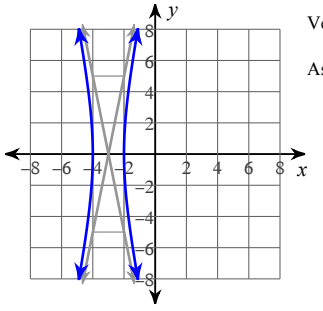
298)



Vertices: $(5,1)$, $(-5,1)$

Asym.: $y=\frac{3}{5}x+1$, $y=-\frac{3}{5}x+1$

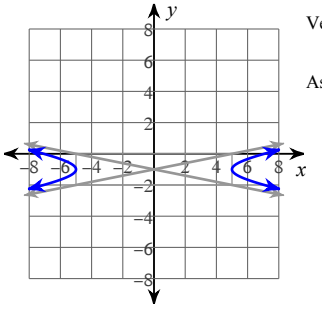
299)



Vertices: $(-2,0)$, $(-4,0)$

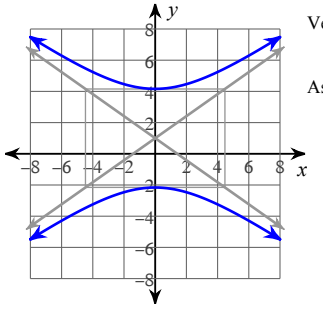
Asym.: $y=5x+15$, $y=-5x-15$

300)



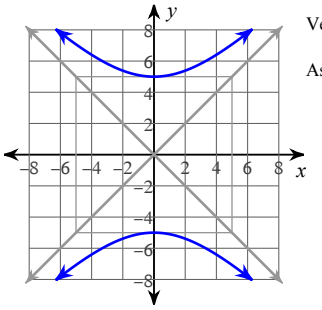
Vertices: $(5, -1)$
$(-5, -1)$
Asym.: $y = \frac{1}{5}x - 1$
$y = -\frac{1}{5}x - 1$

301)



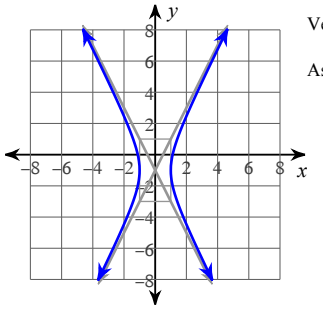
Vertices: $(0, 1 + \sqrt{10})$
$(0, 1 - \sqrt{10})$
Asym.: $y = \frac{x\sqrt{2}}{2} + 1$
$y = -\frac{x\sqrt{2}}{2} + 1$

302)



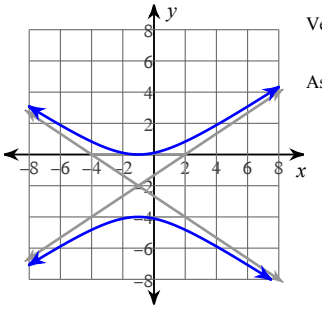
Vertices: $(0, 5)$
$(0, -5)$
Asym.: $y = x$
$y = -x$

303)



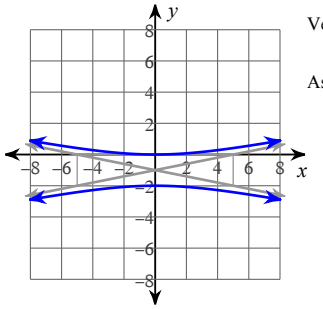
Vertices: $(1, -1)$
$(-1, -1)$
Asym.: $y = 2x - 1$
$y = -2x - 1$

304)



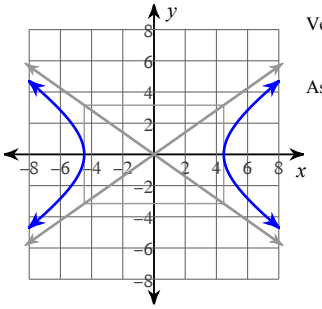
Vertices: $(-1, 0)$
$(-1, -4)$
Asym.: $y = \frac{2}{3}x - \frac{4}{3}$
$y = -\frac{2}{3}x - \frac{8}{3}$

305)



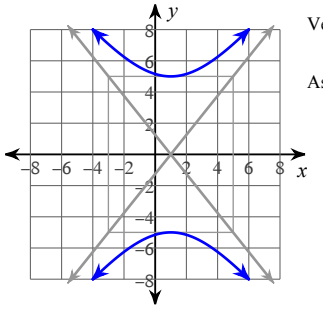
Vertices: $(0, 0)$
$(0, -2)$
Asym.: $y = \frac{1}{5}x - 1$
$y = -\frac{1}{5}x - 1$

306)



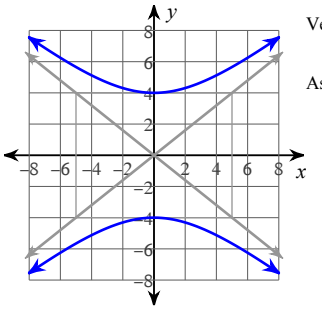
Vertices: $(2\sqrt{5}, 0)$
$(-2\sqrt{5}, 0)$
Asym.: $y = \frac{x\sqrt{2}}{2}$
$y = -\frac{x\sqrt{2}}{2}$

307)



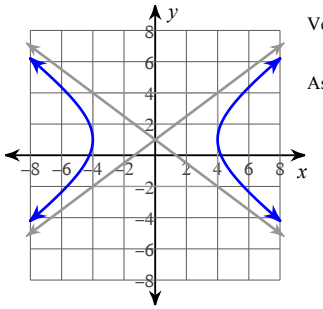
Vertices: $(1, 5)$
$(1, -5)$
Asym.: $y = \frac{5}{4}x - \frac{5}{4}$
$y = -\frac{5}{4}x + \frac{5}{4}$

308)



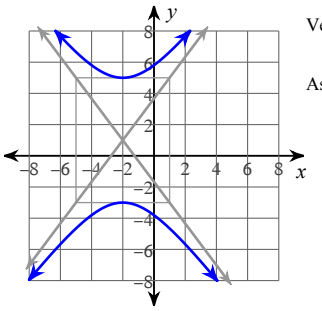
Vertices: $(0, 4)$
$(0, -4)$
Asym.: $y = \frac{4}{5}x$
$y = -\frac{4}{5}x$

309)



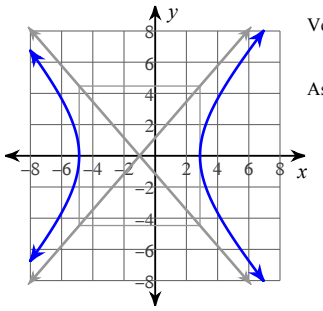
Vertices: $(4, 1)$
$(-4, 1)$
Asym.: $y = \frac{3}{4}x + 1$
$y = -\frac{3}{4}x + 1$

310)



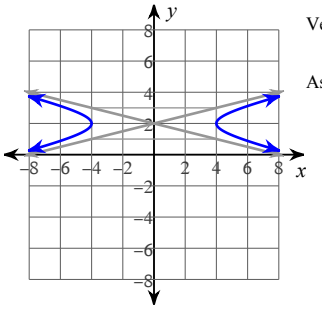
Vertices: $(-2, 5)$
$(-2, -3)$
Asym.: $y = \frac{4}{3}x + \frac{11}{3}$
$y = -\frac{4}{3}x - \frac{5}{3}$

311)



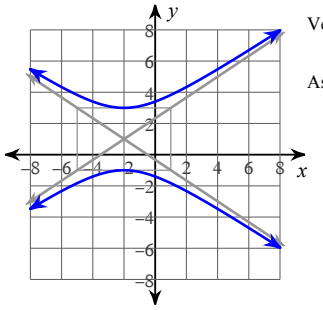
Vertices: $(-1 + \sqrt{15}, 0)$
$(-1 - \sqrt{15}, 0)$
Asym.: $y = \frac{2x\sqrt{3}}{3} + \frac{2\sqrt{3}}{3}$
$y = -\frac{2x\sqrt{3}}{3} - \frac{2\sqrt{3}}{3}$

312)



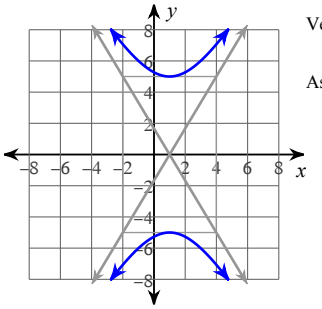
Vertices: $(4, 2)$
$(-4, 2)$
Asym.: $y = \frac{1}{4}x + 2$
$y = -\frac{1}{4}x + 2$

313)



Vertices: $(-2, 3)$
$(-2, -1)$
Asym.: $y = \frac{2}{3}x + \frac{7}{3}$
$y = -\frac{2}{3}x - \frac{1}{3}$

314)



Vertices: $(1, 5)$
$(1, -5)$
Asym.: $y = \frac{5}{3}x - \frac{5}{3}$
$y = -\frac{5}{3}x + \frac{5}{3}$

315) $\frac{(y+2)^2}{16} - \frac{(x+7)^2}{4} = 1$

316) $\frac{(y+8)^2}{36} - \frac{(x+6)^2}{25} = 1$

317) $\frac{(y+7)^2}{80} - \frac{(x+8)^2}{105} = 1$

318) $\frac{(y-6)^2}{105} - \frac{(x+1)^2}{150} = 1$

319) $\frac{(y-8)^2}{196} - \frac{(x-7)^2}{64} = 1$

320) $\frac{(x+10)^2}{49} - \frac{(y-6)^2}{121} = 1$

321) $\frac{(x-1)^2}{110} - \frac{(y+2)^2}{200} = 1$

322) $\frac{(y-7)^2}{169} - \frac{(x-2)^2}{16} = 1$

323) $\frac{(x-1)^2}{81} - \frac{(y-9)^2}{9} = 1$

324) $\frac{(y+2)^2}{36} - \frac{(x-1)^2}{36} = 1$

325) $\frac{(y-6)^2}{20} - \frac{(x-6)^2}{10} = 1$

326) $\frac{x^2}{49} - \frac{(y-6)^2}{36} = 1$

327) $\frac{(x-5)^2}{49} - \frac{(y-4)^2}{100} = 1$

328) $\frac{(x+1)^2}{36} - \frac{(y-2)^2}{49} = 1$

329) $\frac{(x-10)^2}{64} - \frac{(y-5)^2}{64} = 1$

330) $\frac{(y-4)^2}{144} - \frac{(x-9)^2}{144} = 1$

331) $\frac{(y+8)^2}{121} - \frac{(x+6)^2}{100} = 1$

332) $\frac{(x+7)^2}{144} - \frac{(y+6)^2}{16} = 1$

333) $\frac{(y-2)^2}{4} - \frac{(x+6)^2}{196} = 1$

334) $\frac{(y+1)^2}{64} - \frac{(x+9)^2}{169} = 1$

335) $\frac{(x+6)^2}{36} - \frac{(y-3)^2}{144} = 1$

336) $\frac{(y-10)^2}{81} - \frac{(x+7)^2}{144} = 1$

337) $\frac{(y+7)^2}{36} - \frac{(x+5)^2}{225} = 1$

338) $\frac{(x-5)^2}{25} - \frac{(y+2)^2}{36} = 1$

339) $\frac{(y-2)^2}{225} - \frac{(x-4)^2}{25} = 1$

340) $\frac{(x-6)^2}{144} - \frac{(y+2)^2}{36} = 1$

341) $\frac{(x+8)^2}{36} - \frac{(y+2)^2}{81} = 1$

342) $\frac{x^2}{36} - \frac{(y-10)^2}{36} = 1$

343) $\frac{(y+7)^2}{36} - \frac{(x-3)^2}{25} = 1$

344) $\frac{(y-2)^2}{25} - \frac{(x+1)^2}{16} = 1$

345) $\frac{(x-10)^2}{16} - \frac{(y+4)^2}{16} = 1$

346) $\dfrac{(x+2)^2}{36} - \dfrac{y^2}{9} = 1$

347) $\dfrac{(y+1)^2}{36} - \dfrac{(x-4)^2}{144} = 1$

348) $\dfrac{y^2}{36} - \dfrac{(x-1)^2}{144} = 1$

349) $\dfrac{(x+7)^2}{36} - \dfrac{(y+3)^2}{144} = 1$

350) $\dfrac{(x+6)^2}{16} - \dfrac{(y+3)^2}{144} = 1$

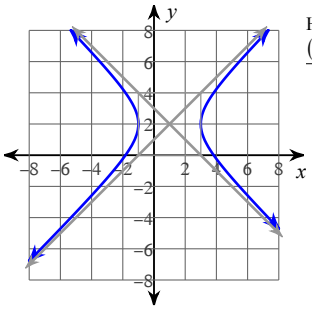
351) $\dfrac{(y-3)^2}{144} - \dfrac{(x+3)^2}{36} = 1$

352) $\dfrac{(y+8)^2}{49} - \dfrac{(x+2)^2}{9} = 1$

353) $\dfrac{(x+7)^2}{100} - \dfrac{(y-5)^2}{100} = 1$

354) $\dfrac{(x+1)^2}{100} - \dfrac{(y-5)^2}{25} = 1$

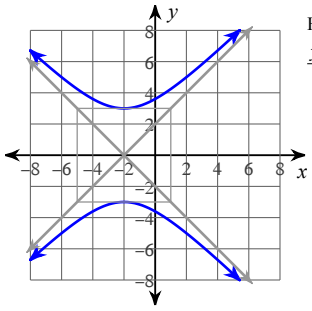
355)



Hyperbola

$\dfrac{(x-1)^2}{4} - \dfrac{(y-2)^2}{4} = 1$

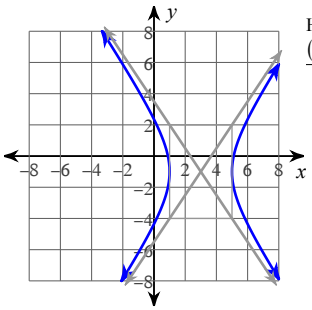
356)



Hyperbola

$\dfrac{y^2}{9} - \dfrac{(x+2)^2}{9} = 1$

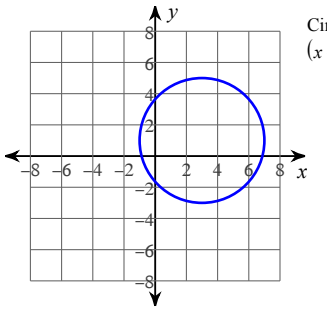
357)



Hyperbola

$\dfrac{(x-3)^2}{4} - \dfrac{(y+1)^2}{9} = 1$

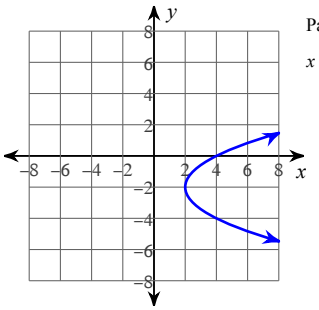
358)



Circle

$(x-3)^2 + (y-1)^2 = 16$

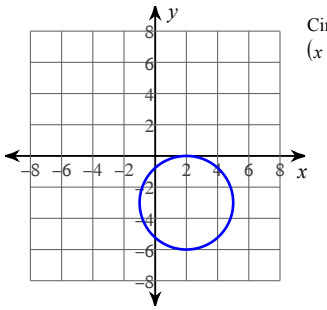
359)



Parabola

$x = \dfrac{1}{2}(y+2)^2 + 2$

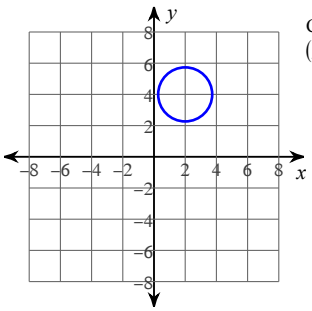
360)



Circle

$(x-2)^2 + (y+3)^2 = 9$

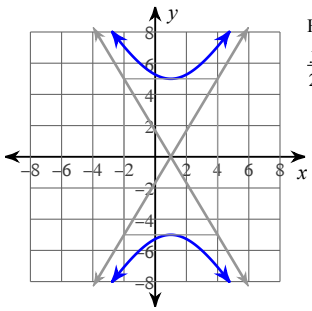
361)



Circle

$(x-2)^2 + (y-4)^2 = 3$

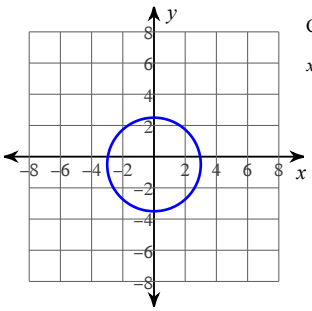
362)



Hyperbola

$\dfrac{y^2}{25} - \dfrac{(x-1)^2}{9} = 1$

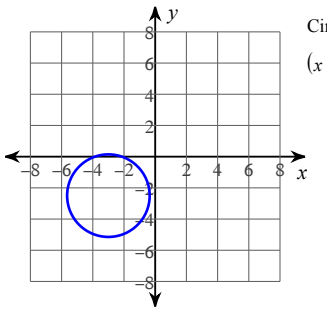
363)



Circle

$x^2 + \left(y + \dfrac{1}{2}\right)^2 = 9$

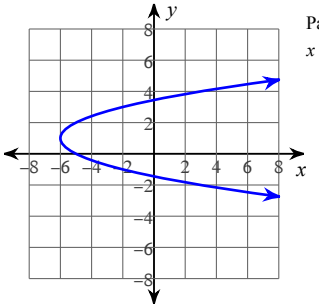
364)



Circle

$(x+3)^2 + \left(y + \dfrac{5}{2}\right)^2 = 7$

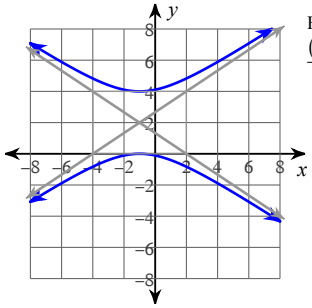
365)



Parabola

$x = (y-1)^2 - 6$

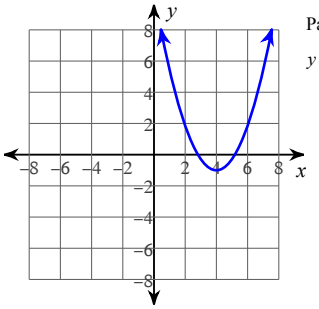
366)



Hyperbola

$\frac{(y-2)^2}{4} - \frac{(x+1)^2}{9} = 1$

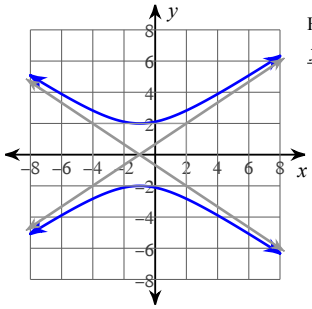
367)



Parabola

$y = \frac{5}{7}(x-4)^2 - 1$

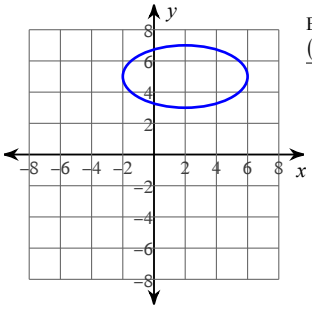
368)



Hyperbola

$\frac{y^2}{4} - \frac{(x+1)^2}{9} = 1$

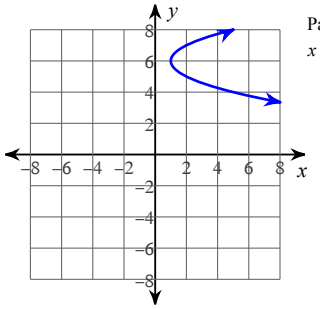
369)



Ellipse

$\frac{(x-2)^2}{16} + \frac{(y-5)^2}{4} = 1$

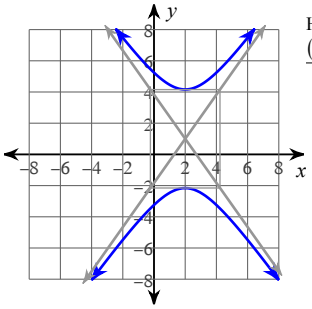
370)



Parabola

$x = (y-6)^2 + 1$

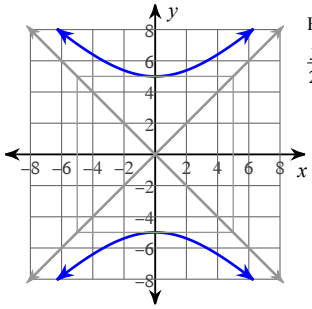
371)



Hyperbola

$\frac{(y-1)^2}{10} - \frac{(x-2)^2}{5} = 1$

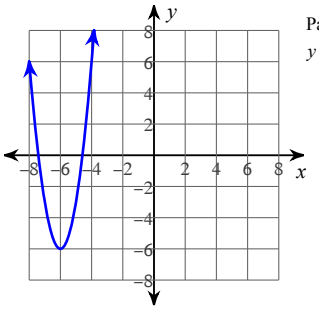
372)



Hyperbola

$\frac{y^2}{25} - \frac{x^2}{25} = 1$

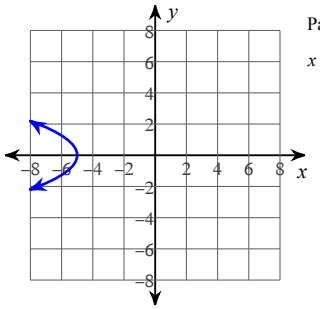
373)



Parabola

$y = 3(x+6)^2 - 6$

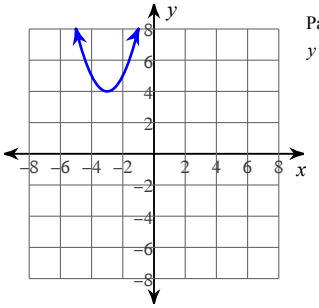
374)



Parabola

$x = -\frac{5}{8}y^2 - 5$

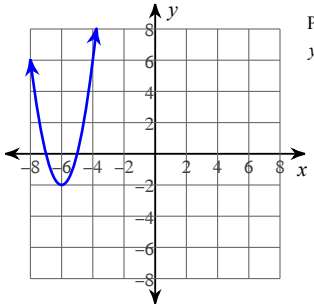
375)



Parabola

$y = (x + 3)^2 + 4$

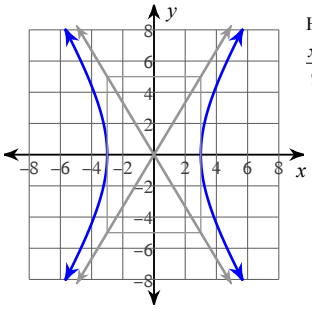
376)



Parabola

$y = 2(x + 6)^2 - 2$

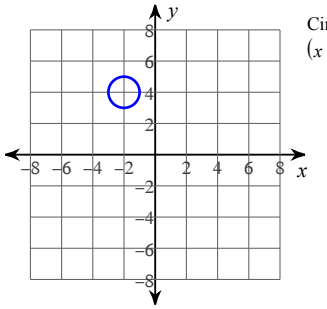
377)



Hyperbola

$\frac{x^2}{9} - \frac{y^2}{25} = 1$

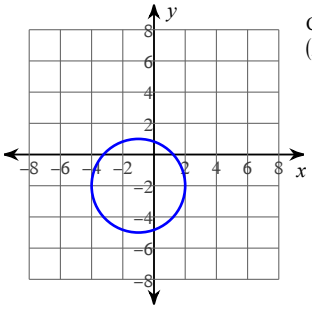
378)



Circle

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

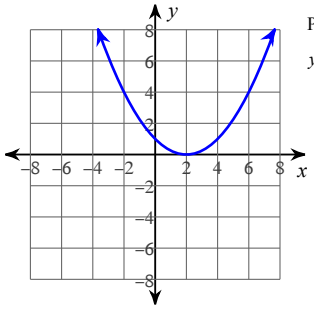
379)



Circle

$(x + 1)^2 + (y + 2)^2 = 9$

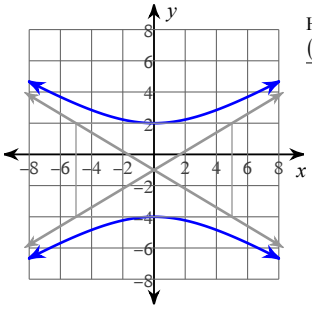
380)



Parabola

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

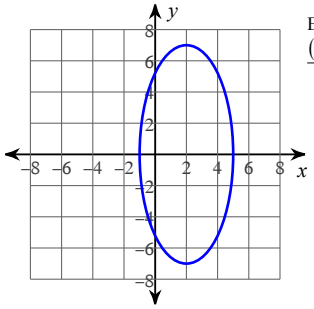
381)



Hyperbola

$\frac{(y + 1)^2}{9} - \frac{x^2}{25} = 1$

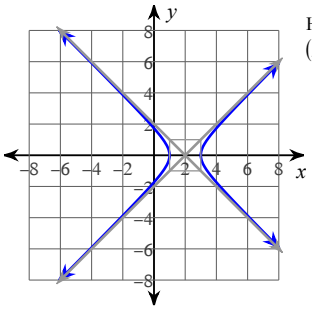
382)



Ellipse

$\frac{(x - 2)^2}{9} + \frac{y^2}{49} = 1$

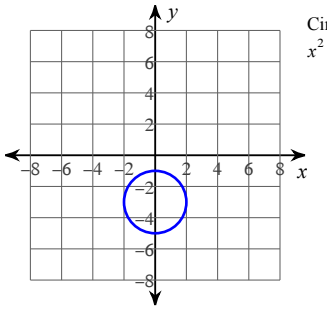
383)



Hyperbola

$(x - 2)^2 - y^2 = 1$

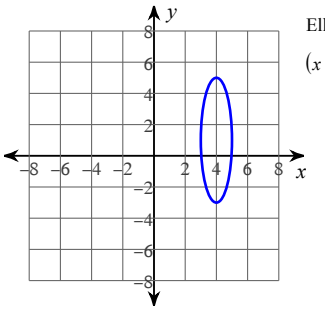
384)



Circle

$x^2 + (y + 3)^2 = 4$

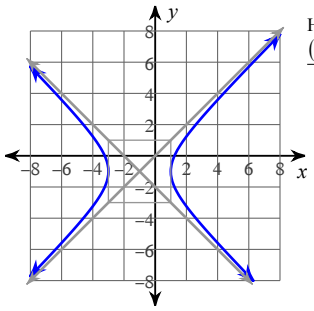
385)



Ellipse

$$\frac{(x-4)^2}{} + \frac{(y-1)^2}{16} = 1$$

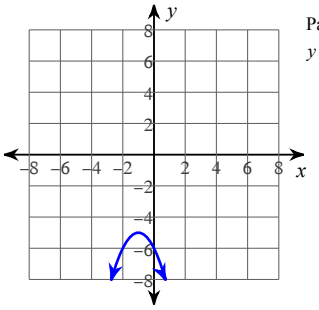
386)



Hyperbola

$$\frac{(x+1)^2}{4} - \frac{(y+1)^2}{4} = 1$$

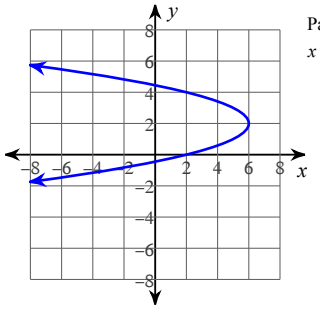
387)



Parabola

$$y = -(x+1)^2 - 5$$

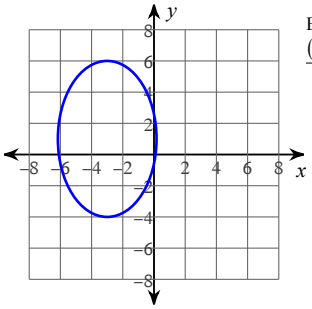
388)



Parabola

$$x = -(y-2)^2 + 6$$

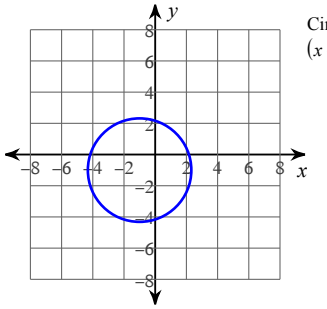
389)



Ellipse

$$\frac{(x+3)^2}{10} + \frac{(y-1)^2}{25} = 1$$

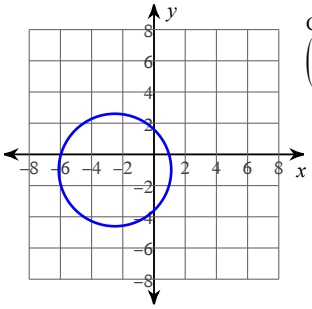
390)



Circle

$$(x+1)^2 + (y+1)^2 = 11$$

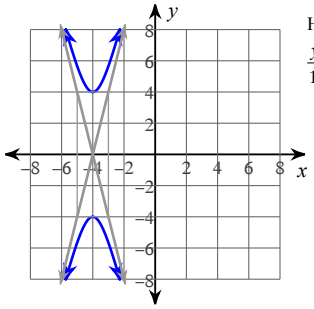
391)



Circle

$$\left(x + \frac{5}{2}\right)^2 + (y+1)^2 = 13$$

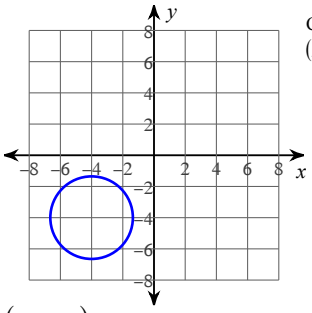
392)



Hyperbola

$$\frac{y^2}{16} - (x+4)^2 = 1$$

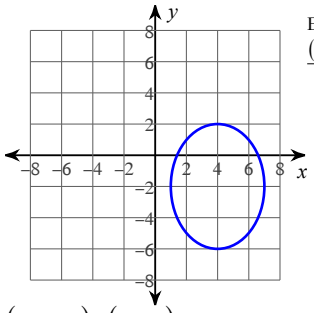
393)



Circle

$$(x+4)^2 + (y+4)^2 = 7$$

394)



Ellipse

$$\frac{(x-4)^2}{9} + \frac{(y+2)^2}{16} = 1$$

395) $(0, -4)$

396) $(-2, 4)$

397) $(0, -1), (0, 1)$

398) $(3, 5)$

399) $(10, 8), (10, 4)$

400) $(1, -3)$

401) $(0, -6), (0, -10), (-10, -6), (-10, -10)$

402) $(0, 4)$

403) $(-3, 1), (-7, 1)$

404) $(0, 6), (0, 2), (-2, 6), (-2, 2)$

405) $(-1, 7), (-2, 9), (-2, 5)$

406) $(-4, 2), (-6, 2), (-1, -2), (-9, -2)$

407) $(9, -2), (9, -4), (-1, 0), (-1, -6)$

408) $(-3, 5), (-5, 5), (2, -1), (-10, -1)$

409) No solution.

410) $(7, -2), (10, -8), (4, -8)$

411) $(-4, -9), (2, 6), (-10, 6)$

412) $(-2, -3), (5, -8), (-9, -8)$

413) $(4, 1)$

414) $(-1, -6), (3, -3), (3, -9)$

415) $(3, 7), (3, -1)$

416) $(7, -8), (9, 3), (5, 3)$

417) $(9, 2), (7, 2)$

418) $(5, -4), (5, -8), (0, -5), (0, -7)$

419) $(6, 1), (6, -3), (1, 5), (1, -7)$

420) $(-6, -3), (-6, -7), (-2, -4), (-2, -6)$

421) $(7, 3)$

422) $(-8, -3)$

423) $(4, -5), (-4, -5), (4, 4), (-4, 4)$

424) $(-2, 8), (-10, 8), (-5, -3), (-7, -3)$

425) $(4, 5), (-1, 5)$

426) $(-1, -8)$

427) $(-9, 4), (-1, 5), (-1, 3)$

428) $(6, -3)$

429) No solution.

430) No solution.

431) $(3, 2), (3, -6)$

432) $(9, 2), (9, -10), (8, -2), (8, -6)$

433) $(1, 1), (-7, 1), (4, -10), (-10, -10)$

434) $(6, -4), (-10, -4), (6, 9), (-10, 9)$

435) $(-2, 0)$

436) $(4, 6)$

437) $(-6, 5)$

438) $(-2, -4)$

439) $(1, 1), (7, 9), (-5, 9)$

440) $(-1, -6)$

441) $(-3, -6)$

442) $(-7, 5), (-7, -2)$

443) $(7, 10), (7, 2), (2, 10), (2, 2)$

444) $(6, -4), (-2, -4), (9, 0), (-5, 0)$

445) $(7, 0)$

446) $(0, 2), (5, -9), (-5, -9)$

447) $(-6, 1)$

448) $(-5, 7), (-7, 7)$

449) $(-5, -2), (-5, -8), (0, -3), (0, -7)$

450) No solution.

451) $(6, 5), (-8, 5)$

452) $(-2, 0), (-10, 0)$

453) $(-2, 6), (3, 7), (3, 5)$

454) $(2, -2), (5, 6), (5, -10)$

455) 22

456) 26

457) 10

458) 19

459) 42

460) 23

461) 32

462) 14

463) 19

464) 29

465) 7

466) 48

467) 26

468) 11

469) 26

470) 64

471) 9

472) 9

473) 19

474) 48

475) $\frac{39}{2} = 19.5$

476) $\frac{43}{2} = 21.5$

477) 56

478) $\frac{13}{2} = 6.5$

479) $\frac{13}{2} = 6.5$

480) 31

481) 22

482) $\frac{21}{2} = 10.5$

483) $\frac{39}{2} = 19.5$

484) $\frac{17}{2} = 8.5$

485) $16 \cdot \sum_{k=1}^{n} k^2 + 8 \cdot \sum_{k=1}^{n} 1$

$16 \cdot \frac{n(n+1)(2n+1)}{6} + 8n$

$\frac{16n^3}{3} + 8n^2 + \frac{32n}{3}$

486) $36 \cdot \sum_{k=1}^{n} k + 30 \cdot \sum_{k=1}^{n} 1$

$36 \cdot \frac{n(n+1)}{2} + 30n$

$18n^2 + 48n$

487) $27 \cdot \sum_{k=1}^{n} k^2 + 15 \cdot \sum_{k=1}^{n} 1$

$27 \cdot \frac{n(n+1)(2n+1)}{6} + 15n$

$9n^3 + \frac{27n^2}{2} + \frac{39n}{2}$

488) $9 \cdot \sum_{k=1}^{n} k + 15 \cdot \sum_{k=1}^{n} 1$

$9 \cdot \frac{n(n+1)}{2} + 15n$

$\frac{39n}{2} + \frac{9n^2}{2}$

489) $16 \cdot \sum_{k=1}^{n} k^2 + 10 \cdot \sum_{k=1}^{n} 1$

$16 \cdot \frac{n(n+1)(2n+1)}{6} + 10n$

$\frac{16n^3}{3} + 8n^2 + \frac{38n}{3}$

490) $27 \cdot \sum_{k=1}^{n} k^2 + 6 \cdot \sum_{k=1}^{n} 1$

$27 \cdot \frac{n(n+1)(2n+1)}{6} + 6n$

$9n^3 + \frac{27n^2}{2} + \frac{21n}{2}$

491) $8 \cdot \sum_{k=1}^{n} k^2 + 12 \cdot \sum_{k=1}^{n} 1$

$8 \cdot \frac{n(n+1)(2n+1)}{6} + 12n$

$\frac{8n^3}{3} + 4n^2 + \frac{40n}{3}$

492) $8 \cdot \sum_{k=1}^{n} k^2 + 10 \cdot \sum_{k=1}^{n} 1$

$8 \cdot \frac{n(n+1)(2n+1)}{6} + 10n$

$\frac{8n^3}{3} + 4n^2 + \frac{34n}{3}$

493) $3 \cdot \sum_{k=1}^{n} k + 4 \cdot \sum_{k=1}^{n} 1$

$3 \cdot \frac{n(n+1)}{2} + 4n$

$\frac{11n}{2} + \frac{3n^2}{2}$

494) $27 \cdot \sum_{k=1}^{n} k + 9 \cdot \sum_{k=1}^{n} 1$

$27 \cdot \frac{n(n+1)}{2} + 9n$

$\frac{45n}{2} + \frac{27n^2}{2}$

495) $\lim_{n \to \infty} \left(\frac{9}{n} \cdot \sum_{k=1}^{n} 1 + \frac{27}{n^3} \cdot \sum_{k=1}^{n} k^2 \right)$

$\lim_{n \to \infty} \left(\frac{9}{n} \cdot n + \frac{27}{n^3} \cdot \frac{n(n+1)(2n+1)}{6} \right)$

$\lim_{n \to \infty} \left(18 + \frac{27}{2n} + \frac{9}{2n^2} \right)$

18

496) $\lim_{n \to \infty} \left(\frac{1}{n} \cdot \sum_{k=1}^{n} 1 + \frac{2}{n^3} \cdot \sum_{k=1}^{n} k^2 \right)$

$\lim_{n \to \infty} \left(\frac{1}{n} \cdot n + \frac{2}{n^3} \cdot \frac{n(n+1)(2n+1)}{6} \right)$

$\lim_{n \to \infty} \left(\frac{5}{3} + \frac{1}{n} + \frac{1}{3n^2} \right)$

$\frac{5}{3} \approx 1.667$

497) $\lim_{n \to \infty} \left(\frac{6}{n} \cdot \sum_{k=1}^{n} 1 + \frac{2}{n^2} \cdot \sum_{k=1}^{n} k \right)$

$\lim_{n \to \infty} \left(\frac{6}{n} \cdot n + \frac{2}{n^2} \cdot \frac{n(n+1)}{2} \right)$

$\lim_{n \to \infty} \left(7 + \frac{1}{n} \right)$

7

498) $\lim_{n \to \infty} \left(\frac{6}{n} \cdot \sum_{k=1}^{n} 1 + \frac{2}{n^3} \cdot \sum_{k=1}^{n} k^2 \right)$

$\lim_{n \to \infty} \left(\frac{6}{n} \cdot n + \frac{2}{n^3} \cdot \frac{n(n+1)(2n+1)}{6} \right)$

$\lim_{n \to \infty} \left(\frac{20}{3} + \frac{1}{n} + \frac{1}{3n^2} \right)$

$\frac{20}{3} \approx 6.667$

499) $\lim_{n \to \infty} \left(\frac{9}{n} \cdot \sum_{k=1}^{n} 1 + \frac{27}{n^2} \cdot \sum_{k=1}^{n} k \right)$

$\lim_{n \to \infty} \left(\frac{9}{n} \cdot n + \frac{27}{n^2} \cdot \frac{n(n+1)}{2} \right)$

$\lim_{n \to \infty} \left(\frac{45}{2} + \frac{27}{2n} \right)$

$\frac{45}{2} = 22.5$

500) $\lim_{n \to \infty} \left(\frac{4}{n} \cdot \sum_{k=1}^{n} 1 + \frac{48}{n^2} \cdot \sum_{k=1}^{n} k \right)$

$\lim_{n \to \infty} \left(\frac{4}{n} \cdot n + \frac{48}{n^2} \cdot \frac{n(n+1)}{2} \right)$

$\lim_{n \to \infty} \left(28 + \frac{24}{n} \right)$

28

501) $\lim_{n \to \infty} \left(\frac{3}{n} \cdot \sum_{k=1}^{n} 1 + \frac{2}{n^3} \cdot \sum_{k=1}^{n} k^2 \right)$

$\lim_{n \to \infty} \left(\frac{3}{n} \cdot n + \frac{2}{n^3} \cdot \frac{n(n+1)(2n+1)}{6} \right)$

$\lim_{n \to \infty} \left(\frac{11}{3} + \frac{1}{n} + \frac{1}{3n^2} \right)$

$\frac{11}{3} \approx 3.667$

502) $\lim_{n \to \infty} \left(\frac{6}{n} \cdot \sum_{k=1}^{n} 1 + \frac{72}{n^2} \cdot \sum_{k=1}^{n} k \right)$

$\lim_{n \to \infty} \left(\frac{6}{n} \cdot n + \frac{72}{n^2} \cdot \frac{n(n+1)}{2} \right)$

$\lim_{n \to \infty} \left(42 + \frac{36}{n} \right)$

42

503) $\lim_{n \to \infty} \left(\frac{6}{n} \cdot \sum_{k=1}^{n} 1 + \frac{4}{n^2} \cdot \sum_{k=1}^{n} k \right)$

$\lim_{n \to \infty} \left(\frac{6}{n} \cdot n + \frac{4}{n^2} \cdot \frac{n(n+1)}{2} \right)$

$\lim_{n \to \infty} \left(8 + \frac{2}{n} \right)$

8

504) $\lim_{n \to \infty} \left(\frac{6}{n} \cdot \sum_{k=1}^{n} 1 + \frac{1}{n^2} \cdot \sum_{k=1}^{n} k \right)$

$\lim_{n \to \infty} \left(\frac{6}{n} \cdot n + \frac{1}{n^2} \cdot \frac{n(n+1)}{2} \right)$

$\lim_{n \to \infty} \left(\frac{13}{2} + \frac{1}{2n} \right)$

$\frac{13}{2} = 6.5$

505) $\lim_{n\to\infty}\left(\frac{8}{n}\cdot\sum_{k=1}^{n}1+\frac{16}{n^3}\cdot\sum_{k=1}^{n}k^2\right)$

$\lim_{n\to\infty}\left(\frac{8}{n}\cdot n+\frac{16}{n^3}\cdot\frac{n(n+1)(2n+1)}{6}\right)$

$\lim_{n\to\infty}\left(\frac{40}{3}+\frac{8}{n}+\frac{8}{3n^2}\right)$

$\frac{40}{3}\approx 13.333$

506) $\lim_{n\to\infty}\left(\frac{1}{n}\cdot\sum_{k=1}^{n}1+\frac{1}{n^3}\cdot\sum_{k=1}^{n}k^2\right)$

$\lim_{n\to\infty}\left(\frac{1}{n}\cdot n+\frac{1}{n^3}\cdot\frac{n(n+1)(2n+1)}{6}\right)$

$\lim_{n\to\infty}\left(\frac{4}{3}+\frac{1}{2n}+\frac{1}{6n^2}\right)$

$\frac{4}{3}\approx 1.333$

507) $\lim_{n\to\infty}\left(\frac{4}{n}\cdot\sum_{k=1}^{n}1+\frac{16}{n^3}\cdot\sum_{k=1}^{n}k^2\right)$

$\lim_{n\to\infty}\left(\frac{4}{n}\cdot n+\frac{16}{n^3}\cdot\frac{n(n+1)(2n+1)}{6}\right)$

$\lim_{n\to\infty}\left(\frac{28}{3}+\frac{8}{n}+\frac{8}{3n^2}\right)$

$\frac{28}{3}\approx 9.333$

508) $\lim_{n\to\infty}\left(\frac{6}{n}\cdot\sum_{k=1}^{n}1+\frac{1}{n^4}\cdot\sum_{k=1}^{n}k^3\right)$

$\lim_{n\to\infty}\left(\frac{6}{n}\cdot n+\frac{1}{n^4}\cdot\frac{n^2\cdot(n+1)^2}{4}\right)$

$\lim_{n\to\infty}\left(\frac{25}{4}+\frac{1}{2n}+\frac{1}{4n^2}\right)$

$\frac{25}{4}=6.25$

509) $\lim_{n\to\infty}\left(\frac{12}{n}\cdot\sum_{k=1}^{n}1+\frac{8}{n^3}\cdot\sum_{k=1}^{n}k^2\right)$

$\lim_{n\to\infty}\left(\frac{12}{n}\cdot n+\frac{8}{n^3}\cdot\frac{n(n+1)(2n+1)}{6}\right)$

$\lim_{n\to\infty}\left(\frac{44}{3}+\frac{4}{n}+\frac{4}{3n^2}\right)$

$\frac{44}{3}\approx 14.667$

510) $\lim_{n\to\infty}\left(\frac{2}{n}\cdot\sum_{k=1}^{n}1+\frac{16}{n^3}\cdot\sum_{k=1}^{n}k^2\right)$

$\lim_{n\to\infty}\left(\frac{2}{n}\cdot n+\frac{16}{n^3}\cdot\frac{n(n+1)(2n+1)}{6}\right)$

$\lim_{n\to\infty}\left(\frac{22}{3}+\frac{8}{n}+\frac{8}{3n^2}\right)$

$\frac{22}{3}\approx 7.333$

511) $\lim_{n\to\infty}\left(\frac{12}{n}\cdot\sum_{k=1}^{n}1+\frac{16}{n^4}\cdot\sum_{k=1}^{n}k^3\right)$

$\lim_{n\to\infty}\left(\frac{12}{n}\cdot n+\frac{16}{n^4}\cdot\frac{n^2\cdot(n+1)^2}{4}\right)$

$\lim_{n\to\infty}\left(16+\frac{8}{n}+\frac{4}{n^2}\right)$

16

512) $\lim_{n\to\infty}\left(\frac{2}{n}\cdot\sum_{k=1}^{n}1+\frac{16}{n^4}\cdot\sum_{k=1}^{n}k^3\right)$

$\lim_{n\to\infty}\left(\frac{2}{n}\cdot n+\frac{16}{n^4}\cdot\frac{n^2\cdot(n+1)^2}{4}\right)$

$\lim_{n\to\infty}\left(6+\frac{8}{n}+\frac{4}{n^2}\right)$

6

513) $\lim_{n\to\infty}\left(\frac{1}{n}\cdot\sum_{k=1}^{n}1+\frac{1}{n^4}\cdot\sum_{k=1}^{n}k^3\right)$

$\lim_{n\to\infty}\left(\frac{1}{n}\cdot n+\frac{1}{n^4}\cdot\frac{n^2\cdot(n+1)^2}{4}\right)$

$\lim_{n\to\infty}\left(\frac{5}{4}+\frac{1}{2n}+\frac{1}{4n^2}\right)$

$\frac{5}{4}=1.25$

514) $\lim_{n\to\infty}\left(\frac{3}{n}\cdot\sum_{k=1}^{n}1+\frac{1}{n^3}\cdot\sum_{k=1}^{n}k^2\right)$

$\lim_{n\to\infty}\left(\frac{3}{n}\cdot n+\frac{1}{n^3}\cdot\frac{n(n+1)(2n+1)}{6}\right)$

$\lim_{n\to\infty}\left(\frac{10}{3}+\frac{1}{2n}+\frac{1}{6n^2}\right)$

$\frac{10}{3}\approx 3.333$

515) $-\frac{65}{6}\approx -10.833$

516) $\frac{20}{3}\approx 6.667$

517) 12

518) $\frac{35}{6}\approx 5.833$

519) $-\frac{26}{3}\approx -8.667$

520) $\frac{16}{3}\approx 5.333$

521) $-\frac{35}{6}\approx -5.833$

522) $-\frac{11}{3}\approx -3.667$

523) 9

524) $\frac{21}{4}=5.25$

525) $\frac{-e+1}{e}\approx -0.632$

526) $\frac{-3e+3}{e}\approx -1.896$

527) $\frac{12}{5} = 2.4$

528) $\frac{2e^3 - 2}{e^2} \approx 5.166$

529) $-\frac{71}{30} \approx -2.367$

530) $\frac{20}{9} \approx 2.222$

531) $\frac{9\sqrt[3]{3} - 3}{2} \approx 4.99$

532) $-\frac{3}{5} = -0.6$

533) $\frac{27\sqrt[3]{3} - 54\sqrt[3]{6}}{4} \approx -14.796$

534) 8

535) $\frac{3e^3 - 3}{e^3} \approx 2.851$

536) $\frac{1}{24} \approx 0.042$

537) $\frac{\pi}{12} \approx 0.262$

538) $\frac{6 - 2\sqrt{3}}{3} \approx 0.845$

539) -15

540) $-\frac{9}{2} = -4.5$

541) -32

542) -2

543) $\frac{-2e^3 + 2}{e^2} \approx -5.166$

544) $\frac{5\ln 8 - 5\ln 2}{2} \approx 3.466$

545) $\frac{49}{6} \approx 8.167$

546) $\frac{4}{3} \approx 1.333$

547) $\frac{3 + \sqrt{3}}{3} \approx 1.577$

548) -27

549) $\frac{-6 + 4\sqrt{3}}{3} \approx 0.309$

550) $\frac{2}{3} \approx 0.667$

551) -11

552) $-\frac{15\sqrt[3]{2}}{4} \approx -4.725$

553) $-\ln 2 + \ln 6 \approx 1.099$

554) $2\ln 3 \approx 2.197$

555) $\int_6^{15} \frac{2}{u^2}\,du$

556) $\int_{10}^{4} \frac{2}{u^2}\,du$

557) $\int_2^6 -\frac{1}{u^2}\,du$

558) $\int_{20}^{4} -\frac{2}{u^2}\,du$

559) $\int_{-3}^{0} -3u^2\,du$

560) $\int_{-1}^{0} 3u^3\,du$

561) $\int_5^2 -\frac{2}{u^2}\,du$

562) $\int_3^7 -\frac{3}{u^2}\,du$

563) $\int_6^3 -\frac{2}{u^2}\,du$

564) $\int_{20}^{4} -\frac{2}{u^2}\,du$

565) $-\frac{3}{10} = -0.3$

566) $\frac{3}{7} \approx 0.429$

567) 3

568) $-\frac{6}{7} \approx -0.857$

569) $-\frac{3}{5} = -0.6$

570) $\frac{3}{10} = 0.3$

571) $\frac{9}{7} \approx 1.286$

572) $\frac{2}{5} = 0.4$

573) $-\frac{3}{10} = -0.3$

574) $\frac{1}{4} = 0.25$

575) $-\frac{3}{5} = -0.6$

576) $-\frac{6}{5} = -1.2$

577) $\frac{1}{4} = 0.25$

578) $-\frac{9}{10} = -0.9$

579) $\frac{2}{5} = 0.4$

580) 20

581) $-\frac{3}{10} = -0.3$

582) $\frac{4}{5} = 0.8$

583) $-\frac{9}{10} = -0.9$

584) $\frac{2}{3} \approx 0.667$

585) $\int_{-6}^{-2} \left(\frac{x^2}{2} + 2x + 4\right) dx$

586) $\int_3^6 \frac{3}{x}\,dx$

587) $\int_{-5}^{-2} \left(\frac{x^2}{2} + x + \frac{1}{2}\right) dx$

588) $\int_1^3 \frac{1}{x^2}\,dx$

589) $\int_{-4}^{-1} \frac{1}{x^2}\,dx$

590) $\int_4^7 \frac{5}{x}\,dx$

591) $\int_2^4 \frac{3}{x^2}\,dx$

592) $\int_{-5}^{0} \left(\frac{x^2}{2} + 3x + \frac{11}{2}\right) dx$

593) $\int_1^5 \frac{3}{x}\,dx$

594) $\int_2^6 \sqrt{x}\,dx$

595) $\int_{-1}^{3} \left(\frac{x^2}{2} + 2x + 2\right) dx$

$= \frac{62}{3} \approx 20.667$

596) $\int_{-7}^{-2} -\frac{3}{x}\,dx$

$= -3\ln 2 + 3\ln 7 \approx 3.758$

597) $\int_4^5 \sqrt{x}\,dx$

$= \frac{2\left(5\sqrt{5} - 8\right)}{3} \approx 2.12$

598) $\int_1^2 \frac{1}{x^2}\,dx$

$= \frac{1}{2} = 0.5$

599) $\int_2^4 \frac{5}{x}\,dx$

$= 5\ln 4 - 5\ln 2 \approx 3.466$

600) $\int_{-5}^{-2} \left(x^2 + 4x + 6\right) dx$

$= 15$

601) $\int_3^7 \frac{3}{x}\,dx$

$= 3\ln 7 - 3\ln 3 \approx 2.542$

602) $\int_1^3 \frac{3}{x^2}\,dx$

$= 2$

603) $\int_3^7 \sqrt{x}\,dx$

$= \frac{2\left(-3\sqrt{3} + 7\sqrt{7}\right)}{3} \approx 8.883$

604) $\int_0^4 \left(x^2 - 4x + 5\right) dx$

$= \frac{28}{3} \approx 9.333$

605) $\int_{\frac{2\pi}{3}}^{\pi} 2\sin x\,dx$

$= 1$

606) $\int_{\frac{\pi}{2}}^{\frac{2\pi}{3}} \sin x\,dx$

$= \frac{1}{2} = 0.5$

607) $\int_{-\pi}^{-\frac{5\pi}{6}} \sec^2 x\,dx$

$= \frac{\sqrt{3}}{3} \approx 0.577$

608) $\int_{\frac{\pi}{3}}^{\frac{\pi}{2}} \sin x\,dx$

$= \frac{1}{2} = 0.5$

609) $\int_0^{\frac{\pi}{6}} \cos x\,dx$

$= \frac{1}{2} = 0.5$

610) $\int_{-\frac{\pi}{3}}^{-\frac{\pi}{4}} 2\csc x\cot x\,dx$

$= \frac{2\left(3\sqrt{2} - 2\sqrt{3}\right)}{3} \approx 0.519$

611) $\int_{\frac{\pi}{4}}^{\frac{\pi}{2}} \csc x\cot x\,dx$

$= -1 + \sqrt{2} \approx 0.414$

612) $\int_{\frac{\pi}{6}}^{\frac{2\pi}{3}} \sin x\,dx$

$= \frac{1 + \sqrt{3}}{2} \approx 1.366$

613) $\int_{-\frac{3\pi}{4}}^{-\frac{\pi}{2}} -2\cos x\,dx$

$= 2 - \sqrt{2} \approx 0.586$

614) $\int_{\frac{\pi}{3}}^{\pi} \sin x\,dx$

$= \frac{3}{2} = 1.5$

615) $\int_{-4}^{-1} \left(-x^2 - 6x - 9 - (x - 3)\right) dx$

$= \frac{27}{2} = 13.5$

616) $\int_1^3 \left(\frac{1}{x^2} + 3\right) dx$

$= \frac{20}{3} \approx 6.667$

617) $\int_{-3}^{-1} \left(\frac{3}{x^2} + 1\right) dx$

$= 4$

618) $\int_{-5}^{-2} \left(x^2 + 8x + 12 - \left(\frac{x^2}{2} + 4x + 3\right)\right) dx$

$= \frac{9}{2} = 4.5$

619) $\int_{-3}^{-2} \left(\frac{1}{x^2} + 3\right) dx$

$= \frac{19}{6} \approx 3.167$

620) $\int_{-3}^{0} \left(-\frac{x}{2} + 3 + \frac{x^2}{2}\right) dx$

$= \frac{63}{4} = 15.75$

621) $\int_1^4 \left(4 - \frac{4}{x^2}\right) dx$

$= 9$

622) $\int_0^4 \left(\sqrt{x} + 3\sqrt{x}\right) dx$

$= \frac{64}{3} \approx 21.333$

623) $\int_{-3}^{-1}\left(\frac{4}{x^2}+3\right)dx$

$=\frac{26}{3}\approx 8.667$

624) $\int_{0}^{1}\left(x^2-2x+3+2x^2\right)dx$

$=3$

625) $\int_{-6}^{-4}\left(\frac{x^2}{2}+2x\right)dx+$

$\int_{-4}^{-2}\left(-4-\left(\frac{x^2}{2}+2x-4\right)\right)dx$

$=8$

626) $\int_{-4}^{0}\left(-\frac{x^2}{2}-2x-2-\left(x^2+4x-2\right)\right)dx+$

$\int_{0}^{1}\left(x^2+4x-2-\left(-\frac{x^2}{2}-2x-2\right)\right)dx$

$=\frac{39}{2}=19.5$

627) $\int_{-3}^{-1}\left(\frac{x^2}{2}+1-\left(\frac{x^2}{2}+4x+5\right)\right)dx+$

$\int_{-1}^{0}\left(\frac{x^2}{2}+4x+5-\left(\frac{x^2}{2}+1\right)\right)dx$

$=10$

628) $\int_{-5}^{-4}\left(x^2+4x\right)dx+$

$\int_{-4}^{-2}\left(1-\left(x^2+4x+1\right)\right)dx$

$=\frac{23}{3}\approx 7.667$

629) $\int_{-4}^{-3}\left(-x^2-8x-11-\left(-2x^2-8x-2\right)\right)dx+$

$\int_{-3}^{-2}\left(-2x^2-8x-2-\left(-x^2-8x-11\right)\right)dx$

$=6$

630) $\int_{-5}^{-1}\left(-x^2-6x-4-\left(x^2+6x+6\right)\right)dx+$

$\int_{-1}^{0}\left(x^2+6x+6-\left(-x^2-6x-4\right)\right)dx$

$=26$

631) $\int_{1}^{3}\left(x^2-6x+10-\left(\frac{x^2}{2}-x-\frac{1}{2}\right)\right)dx+$

$\int_{3}^{5}\left(\frac{x^2}{2}-x-\frac{1}{2}-\left(x^2-6x+10\right)\right)dx$

$=8$

632) $\int_{-3}^{-1}\left(-x-2-\left(x^2+6x+4\right)\right)dx+$

$\int_{-1}^{0}\left(x^2+6x+4-\left(-x-2\right)\right)dx$

$=\frac{61}{6}\approx 10.167$

633) $\int_{-3}^{-2}\left(x^2+2x-\left(-x^2+4\right)\right)dx+$

$\int_{-2}^{1}\left(-x^2+4-\left(x^2+2x\right)\right)dx$

$=\frac{38}{3}\approx 12.667$

634) $\int_{-5}^{-2}\left(-2x-4-\left(x^2+6x+8\right)\right)dx+$

$\int_{-2}^{-1}\left(x^2+6x+8-\left(-2x-4\right)\right)dx$

$=\frac{34}{3}\approx 11.333$

635) $\int_{-3}^{0}\left(-x-\left(-x^3-x^2+5x\right)\right)dx+$

$\int_{0}^{2}\left(-x^3-x^2+5x+x\right)dx$

$=\frac{253}{12}\approx 21.083$

636) $\int_{-2}^{0}\left(x^3-4x\right)dx+$

$\int_{0}^{2}\left(x^2-\left(x^3+x^2-4x\right)\right)dx$

$=8$

637) $\int_{-2}^{0}\left(-\frac{x^2}{2}-\left(-\frac{x^3}{2}+3x\right)\right)dx+\int_{0}^{3}\left(-\frac{x^3}{2}+3x+\frac{x^2}{2}\right)dx$
$=\frac{253}{24}\approx 10.542$

638) $\int_{-3}^{0}-\left(-\frac{x^3}{2}-\frac{x^2}{2}+3x\right)dx+\int_{0}^{2}\left(-\frac{x^3}{2}-\frac{x^2}{2}+3x-0\right)dx$
$=\frac{253}{24}\approx 10.542$

639) $\int_{-3}^{0}\left(\frac{x^3}{2}+\frac{x^2}{2}-3x\right)dx+\int_{0}^{2}\left(x-\left(\frac{x^3}{2}+\frac{x^2}{2}-2x\right)\right)dx$
$=\frac{253}{24}\approx 10.542$

640) $\int_{0}^{2}\left(-x^2+4x-\left(-\frac{x^3}{2}+2x^2\right)\right)dx+\int_{2}^{4}\left(-\frac{x^3}{2}+2x^2-\left(-x^2+4x\right)\right)dx$
$=4$

641) $\int_{-2}^{0}\left(-\frac{x^2}{2}-\left(-\frac{x^3}{2}-\frac{x^2}{2}+2x\right)\right)dx+\int_{0}^{2}\left(-\frac{x^3}{2}-\frac{x^2}{2}+2x+\frac{x^2}{2}\right)dx$
$=4$

642) $\int_{-2}^{0}\left(2x^3+2x^2-4x\right)dx+\int_{0}^{1}\left(x^2-\left(2x^3+3x^2-4x\right)\right)dx$
$=\frac{37}{6}\approx 6.167$

643) $\int_{0}^{3}\left(-x^2+4x-\left(-x^3+7x^2-11x\right)\right)dx+\int_{3}^{5}\left(-x^3+7x^2-11x-\left(-x^2+4x\right)\right)dx$
$=\frac{253}{12}\approx 21.083$

644) $\int_{-2}^{0}\left(\frac{x^3}{2}-x^2-4x\right)dx+\int_{0}^{4}\left(x-\left(\frac{x^3}{2}-x^2-3x\right)\right)dx$
$=\frac{74}{3}\approx 24.667$

645) $2\int_{-4}^{4}\left(4-\frac{x^2}{4}\right)^2dx$
$=\frac{2048}{15}\approx 136.533$

646) $2\int_{-7}^{7}\left(\sqrt{49-x^2}\right)^2dx$
$=\frac{2744}{3}\approx 914.667$

647) $\int_{-5}^{5}\left(\sqrt{25-x^2}\right)^2dx$
$=\frac{500}{3}\approx 166.667$

648) $2\int_{-4}^{4}\left(-\frac{x^2}{4}+4\right)^2dx$
$=\frac{2048}{15}\approx 136.533$

649) $\int_{-2}^{2}\left(-x^2+4\right)^2dx$
$=\frac{512}{15}\approx 34.133$

650) $\int_{-3}^{3}\left(1-\frac{x^2}{9}\right)^2dx$
$=\frac{16}{5}=3.2$

651) $\frac{1}{2}\int_{-2}^{2}\left(-x^2+4\right)^2dx$
$=\frac{256}{15}\approx 17.067$

652) $\int_{-4}^{4}\left(\sqrt{16-x^2}\right)^2dx$
$=\frac{256}{3}\approx 85.333$

653) $\int_{-1}^{1}\left(1-x^2\right)^2dx$
$=\frac{16}{15}\approx 1.067$

654) $\frac{1}{2}\int_{-3}^{3}\left(1-\frac{x^2}{9}\right)^2dx$
$=\frac{8}{5}=1.6$

655) $\frac{\sqrt{3}}{4}\int_{-5}^{5}\left(\sqrt{9-\frac{9x^2}{25}}+\sqrt{9-\frac{9x^2}{25}}\right)^2dx$
$=60\sqrt{3}\approx 103.923$

656) $\frac{1}{4}\int_{-7}^{7}\left(\sqrt{49-x^2}\right)^2\,dx$

$=\frac{343}{3}\approx 114.333$

657) $\frac{\sqrt{3}}{4}\int_{-7}^{7}\left(\sqrt{49-x^2}\right)^2\,dx$

$=\frac{343\sqrt{3}}{3}\approx 198.031$

658) $\frac{1}{2}\int_{-2}^{2}\left(4-x^2\right)^2\,dx$

$=\frac{256}{15}\approx 17.067$

659) $\frac{\pi}{8}\int_{-7}^{7}\left(\sqrt{4-\frac{4x^2}{49}}+\sqrt{4-\frac{4x^2}{49}}\right)^2\,dx$

$=\frac{56\pi}{3}\approx 58.643$

660) $\frac{\sqrt{3}}{4}\int_{-7}^{7}\left(\sqrt{49-x^2}+\sqrt{49-x^2}\right)^2\,dx$

$=\frac{1372\sqrt{3}}{3}\approx 792.125$

661) $\frac{1}{4}\int_{-3}^{3}\left(\sqrt{9-x^2}\right)^2\,dx$

$=9$

662) $\frac{1}{2}\int_{-5}^{5}\left(\sqrt{25-x^2}\right)^2\,dx$

$=\frac{250}{3}\approx 83.333$

663) $\frac{1}{4}\int_{-2}^{2}\left(-x^2+4\right)^2\,dx$

$=\frac{128}{15}\approx 8.533$

664) $\frac{1}{2}\int_{-2}^{2}\left(\sqrt{49-\frac{49x^2}{4}}+\sqrt{49-\frac{49x^2}{4}}\right)^2\,dx$

$=\frac{784}{3}\approx 261.333$

665) $\frac{1}{2}\int_{0}^{7}\left(\sqrt{49-y^2}+\sqrt{49-y^2}\right)^2\,dy$

$=\frac{1372}{3}\approx 457.333$

666) $\frac{\sqrt{3}}{4}\int_{0}^{6}\left(\sqrt{36-y^2}+\sqrt{36-y^2}\right)^2\,dy$

$=144\sqrt{3}\approx 249.415$

667) $\frac{\pi}{8}\int_{0}^{7}\left(\sqrt{49-y^2}+\sqrt{49-y^2}\right)^2\,dy$

$=\frac{343\pi}{3}\approx 359.189$

668) $\frac{1}{4}\int_{-6}^{6}\left(\sqrt{16-\frac{16y^2}{36}}+\sqrt{16-\frac{16y^2}{36}}\right)^2\,dy$

$=128$

669) $\frac{\pi}{8}\int_{-7}^{7}\left(\sqrt{16-\frac{16y^2}{49}}+\sqrt{16-\frac{16y^2}{49}}\right)^2\,dy$

$=\frac{224\pi}{3}\approx 234.572$

670) $\frac{\pi}{8}\int_{-7}^{7}\left(\sqrt{36-\frac{36y^2}{49}}+\sqrt{36-\frac{36y^2}{49}}\right)^2\,dy$

$=168\pi\approx 527.788$

671) $\frac{1}{4}\int_{-7}^{7}\left(\sqrt{16-\frac{16y^2}{49}}+\sqrt{16-\frac{16y^2}{49}}\right)^2\,dy$

$=\frac{448}{3}\approx 149.333$

672) $\frac{1}{4}\int_{-7}^{7}\left(\sqrt{25-\frac{25y^2}{49}}+\sqrt{25-\frac{25y^2}{49}}\right)^2\,dy$

$=\frac{700}{3}\approx 233.333$

673) $\frac{1}{2}\int_{-5}^{5}\left(\sqrt{16-\frac{16y^2}{25}}+\sqrt{16-\frac{16y^2}{25}}\right)^2\,dy$

$=\frac{640}{3}\approx 213.333$

674) $\frac{1}{2}\int_{-6}^{6}\left(\sqrt{9-\frac{9y^2}{36}}+\sqrt{9-\frac{9y^2}{36}}\right)^2\,dy$

$=144$

675) $\pi\int_{4}^{6}\left(\sqrt{x+2}\right)^2\,dx$

$=14\pi\approx 43.982$

676) $\pi\int_{0}^{1}\left(x^2\right)^2\,dx$

$=\frac{1}{5}\pi\approx 0.628$

677) $\pi\int_{0}^{4}\left(\sqrt{x}\right)^2\,dx$

$=8\pi\approx 25.133$

678) $\pi\int_{-3}^{0}\left(2\sqrt{x+5}\right)^2\,dx$

$=42\pi\approx 131.947$

679) $\pi\int_{0}^{1}\left(\sqrt[3]{x}\right)^2\,dx$

$=\frac{3}{5}\pi\approx 1.885$

680) $\pi\int_{1}^{7}\left(2\sqrt{x+1}\right)^2\,dx$
$= 120\pi \approx 376.991$

681) $\pi\int_{0}^{1}\left(\sqrt{x}\right)^2\,dx$
$= \frac{1}{2}\pi \approx 1.571$

682) $\pi\int_{-1}^{1}\left(-x^2+1\right)^2\,dx$
$= \frac{16}{15}\pi \approx 3.351$

683) $\pi\int_{-2}^{2}\left(-x^2+4\right)^2\,dx$
$= \frac{512}{15}\pi \approx 107.233$

684) $\pi\int_{0}^{1}\left(-x^2+1\right)^2\,dx$
$= \frac{8}{15}\pi \approx 1.676$

685) $\pi\int_{-2}^{2}\left(-y^2+4\right)^2\,dy$
$= \frac{512}{15}\pi \approx 107.233$

686) $\pi\int_{0}^{1}\left(y^3\right)^2\,dy$
$= \frac{1}{7}\pi \approx 0.449$

687) $\pi\int_{0}^{4}\left(\sqrt{y}\right)^2\,dy$
$= 8\pi \approx 25.133$

688) $\pi\int_{0}^{1}\left(y^2\right)^2\,dy$
$= \frac{1}{5}\pi \approx 0.628$

689) $\pi\int_{-1}^{1}\left(-y^2+1\right)^2\,dy$
$= \frac{16}{15}\pi \approx 3.351$

690) $\pi\int_{0}^{1}\left(-y^2+1\right)^2\,dy$
$= \frac{8}{15}\pi \approx 1.676$

691) $\pi\int_{0}^{1}\left(\sqrt{y}\right)^2\,dy$
$= \frac{1}{2}\pi \approx 1.571$

692) $\pi\int_{0}^{2}\left(y^2\right)^2\,dy$
$= \frac{32}{5}\pi \approx 20.106$

693) $\pi\int_{0}^{2}\left(-y^2+4\right)^2\,dy$
$= \frac{256}{15}\pi \approx 53.617$

694) $\pi\int_{0}^{1}\left(\left(-x^2+2\right)^2-1\right)\,dx$
$= \frac{28}{15}\pi \approx 5.864$

695) $\pi\int_{-2}^{0}\left(\left(x^2+4\right)^2-3^2\right)\,dx$
$= \frac{626}{15}\pi \approx 131.109$

696) $\pi\int_{1}^{4}\left(6^2-\left(\sqrt{x}\right)^2\right)\,dx$
$= \frac{201}{2}\pi \approx 315.73$

697) $\pi\int_{0}^{1}\left(\left(\sqrt{x}+3\right)^2-\left(x^2+3\right)^2\right)\,dx$
$= \frac{23}{10}\pi \approx 7.226$

698) $\pi\int_{-1}^{1}\left(\left(-x^2+3\right)^2-2^2\right)\,dx$
$= \frac{32}{5}\pi \approx 20.106$

699) $\pi\int_{-1}^{1}\left(\left(-x^2+2\right)^2-1\right)\,dx$
$= \frac{56}{15}\pi \approx 11.729$

700) $\pi\int_{1}^{4}\left(5^2-\left(\sqrt{x}\right)^2\right)\,dx$
$= \frac{135}{2}\pi \approx 212.058$

701) $\pi\int_{0}^{1}\left(\left(\sqrt{x}+4\right)^2-\left(x^2+4\right)^2\right)\,dx$
$= \frac{89}{30}\pi \approx 9.32$

702) $\pi\int_{1}^{4}\left(4^2-\left(\sqrt{x}\right)^2\right)\,dx$
$= \frac{81}{2}\pi \approx 127.235$

703) $\pi\int_{0}^{4}\left(\left(\sqrt{x}+3\right)^2-3^2\right)\,dx$
$= 40\pi \approx 125.664$

704) $\pi\int_{\frac{1}{4}}^{2}\left(4^2-\left(\frac{1}{y}\right)^2\right)\,dy$
$= \frac{49}{2}\pi \approx 76.969$

705) $\pi\int_{0}^{1}\left(\left(\sqrt{y}+1\right)^2-1\right)\,dy$
$= \frac{11}{6}\pi \approx 5.76$

706) $\pi\int_{0}^{1}\left(1-\left(y^3\right)^2\right)\,dy$
$= \frac{6}{7}\pi \approx 2.693$

707) $\pi\int_{0}^{4}\left(\left(\sqrt{y}+1\right)^2-1\right)\,dy$
$= \frac{56}{3}\pi \approx 58.643$

708) $\pi\int_{0}^{1}\left(\left(-y^2+2\right)^2-1\right)\,dy$
$= \frac{28}{15}\pi \approx 5.864$

709) $\pi\int_{-2}^{2}\left(\left(-y^2+6\right)^2-2^2\right)dy$

$=\frac{384}{5}\pi\approx 241.274$

710) $\pi\int_{-2}^{2}\left(\left(-y^2+5\right)^2-1\right)dy$

$=\frac{832}{15}\pi\approx 174.254$

711) $\pi\int_{0}^{1}\left(\left(\sqrt{y}+3\right)^2-3^2\right)dy$

$=\frac{9}{2}\pi\approx 14.137$

712) $\pi\int_{0}^{4}\left(\left(\sqrt{y}+3\right)^2-3^2\right)dy$

$=40\pi\approx 125.664$

713) $\pi\int_{0}^{2}\left(\left(-y^2+5\right)^2-1\right)dy$

$=\frac{416}{15}\pi\approx 87.127$

714) $\pi\int_{0}^{2}\left((2x)^2-\left(x^2\right)^2\right)dx$

$=\frac{64}{15}\pi\approx 13.404$

715) $\pi\int_{-2}^{2}\left(\left(-x^2+5\right)^2-1\right)dx$

$=\frac{832}{15}\pi\approx 174.254$

716) $\pi\int_{0}^{1}\left((3-x^2)^2-\left(3-\sqrt{x}\right)^2\right)dx$

$=\frac{17}{10}\pi\approx 5.341$

717) $\pi\int_{0}^{4}\left(\left(\sqrt{x}+1\right)^2-1\right)dx$

$=\frac{56}{3}\pi\approx 58.643$

718) $\pi\int_{-1}^{2}\left(\left(x^2+2\right)^2-1\right)dx$

$=\frac{138}{5}\pi\approx 86.708$

719) $\pi\int_{0}^{1}\left(3^2-\left(3-\sqrt{x}\right)^2\right)dx$

$=\frac{7}{2}\pi\approx 10.996$

720) $\pi\int_{0}^{1}\left(\left(x^2+1\right)^2-1\right)dx$

$=\frac{13}{15}\pi\approx 2.723$

721) $\pi\int_{0}^{1}\left(\left(\sqrt{x}+4\right)^2-4^2\right)dx$

$=\frac{35}{6}\pi\approx 18.326$

722) $\pi\int_{0}^{1}\left(\left(\sqrt{x}+1\right)^2-1\right)dx$

$=\frac{11}{6}\pi\approx 5.76$

723) $\pi\int_{0}^{2}\left(\left(x^2+1\right)^2-1\right)dx$

$=\frac{176}{15}\pi\approx 36.861$

724) $\pi\int_{-1}^{1}\left(\left(-y^2+3\right)^2-2^2\right)dy$

$=\frac{32}{5}\pi\approx 20.106$

725) $\pi\int_{0}^{2}\left(\left(-y^2+5\right)^2-1\right)dy$

$=\frac{416}{15}\pi\approx 87.127$

726) $\pi\int_{0}^{4}\left(\left(\sqrt{y}+3\right)^2-\left(\frac{y}{2}+3\right)^2\right)dy$

$=\frac{32}{3}\pi\approx 33.51$

727) $\pi\int_{0}^{2}\left(\left(-y^2+6\right)^2-2^2\right)dy$

$=\frac{192}{5}\pi\approx 120.637$

728) $\pi\int_{0}^{1}\left(5^2-\left(5-\sqrt{y}\right)^2\right)dy$

$=\frac{37}{6}\pi\approx 19.373$

729) $\pi\int_{0}^{4}\left(\left(\sqrt{y}+1\right)^2-\left(\frac{y}{2}+1\right)^2\right)dy$

$=\frac{16}{3}\pi\approx 16.755$

730) $\pi\int_{0}^{4}\left(\left(\sqrt{y}+3\right)^2-3^2\right)dy$

$=40\pi\approx 125.664$

731) $\pi\int_{0}^{1}\left(\left(\sqrt{y}+3\right)^2-\left(y^2+3\right)^2\right)dy$

$=\frac{23}{10}\pi\approx 7.226$

732) $\pi\int_{0}^{1}\left(\left(\sqrt{y}+2\right)^2-\left(y^2+2\right)^2\right)dy$

$=\frac{49}{30}\pi\approx 5.131$

733) $\pi\int_{0}^{1}\left(\left(\sqrt{y}+1\right)^2-1\right)dy$

$=\frac{11}{6}\pi\approx 5.76$

734) $2\pi\int_0^1 x(-x^2+3-2)\,dx$
$=\frac{1}{2}\pi$

735) $2\pi\int_{\frac{1}{4}}^5 x\left(4-\frac{1}{x}\right)dx$
$=\frac{361}{4}\pi$

736) $2\pi\int_{\frac{2}{5}}^3 x\left(5-\frac{2}{x}\right)dx$
$=\frac{169}{5}\pi$

737) $2\pi\int_0^1 x(x^2+2-2)\,dx$
$=\frac{1}{2}\pi$

738) $2\pi\int_0^1 x\left(1-\sqrt[3]{x}\right)dx$
$=\frac{1}{7}\pi$

739) $2\pi\int_0^1 x\left(5-\sqrt{x}\right)dx$
$=\frac{21}{5}\pi$

740) $2\pi\int_0^2 x(2x+1-(x^2+1))\,dx$
$=\frac{8}{3}\pi$

741) $2\pi\int_1^4 x\left(6-\sqrt{x}\right)dx$
$=\frac{326}{5}\pi$

742) $2\pi\int_0^2 x(-x^2+6-(-x+4))\,dx$
$=\frac{16}{3}\pi$

743) $2\pi\int_0^2 x(-x^2+6-2)\,dx$
$=8\pi$

744) $2\pi\int_{\frac{1}{3}}^5 y\left(3-\frac{1}{y}\right)dy$
$=\frac{196}{3}\pi$

745) $2\pi\int_0^1 y\left(\sqrt{y}+1-1\right)dy$
$=\frac{4}{5}\pi$

746) $2\pi\int_0^1 y(1-y^3)\,dy$
$=\frac{3}{5}\pi$

747) $2\pi\int_0^1 y\left(\sqrt{y}+3-(y^2+3)\right)dy$
$=\frac{3}{10}\pi$

748) $2\pi\int_0^4 y\left(\sqrt{y}+3-3\right)dy$
$=\frac{128}{5}\pi$

749) $2\pi\int_0^2 y(-y^2+5-1)\,dy$
$=8\pi$

750) $2\pi\int_0^1 y(y^2+1-1)\,dy$
$=\frac{1}{2}\pi$

751) $2\pi\int_0^1 y(-y^2+3-2)\,dy$
$=\frac{1}{2}\pi$

752) $2\pi\int_0^1 y\cdot y^3\,dy$
$=\frac{2}{5}\pi$

753) $2\pi\int_0^4 y\left(\sqrt{y}+3-\left(3+\frac{y}{2}\right)\right)dy$
$=\frac{64}{15}\pi$

754) $2\pi\int_0^1 (1-x)\left(\sqrt{x}+1-(x^2+1)\right)dx$
$=\frac{11}{30}\pi$

755) $2\pi\int_0^1 (1-x)\left(\sqrt{x}+4-4\right)dx$
$=\frac{8}{15}\pi$

756) $2\pi\int_0^1 (1-x)(-x^2+5-(x+3))\,dx$
$=\frac{3}{2}\pi$

757) $2\pi\int_0^1 (x+4)\left(1-\sqrt[3]{x}\right)dx$
$=\frac{15}{7}\pi$

758) $2\pi\int_0^2 (3-x)(2x+2-(x^2+2))\,dx$
$=\frac{16}{3}\pi$

759) $2\pi\int_0^4 (x+4)(\sqrt{x}+4-4)\,dx$
$=\frac{1024}{15}\pi$

760) $2\pi\int_0^2 (2-x)(-x^2+4-(-x+2))\,dx$
$=8\pi$

761) $2\pi\int_0^1 (2-x)(\sqrt{x}+4-4)\,dx$
$=\frac{28}{15}\pi$

762) $2\pi\int_{-1}^1 (5-x)(-x^2+7-(x^2+5))\,dx$
$=\frac{80}{3}\pi$

763) $2\pi\int_0^2 (5-x)(2x-x^2)\,dx$
$=\frac{32}{3}\pi$

764) $2\pi\int_0^1 (3-y)y^3\,dy$
$=\frac{11}{10}\pi$

765) $2\pi\int_0^1 (y+3)(1-y^3)\,dy$
$=\frac{51}{10}\pi$

766) $2\pi\int_0^1 (3-y)(-y^2+3-2)\,dy$
$=\frac{7}{2}\pi$

767) $2\pi\int_0^4 (2-y)(\sqrt{y}+3-3)\,dy$
$=\frac{64}{15}\pi$

768) $2\pi\int_0^1 (2-y)(y^2+1-1)\,dy$
$=\frac{5}{6}\pi$

769) $2\pi\int_0^1 (y+3)y^3\,dy$
$=\frac{19}{10}\pi$

770) $2\pi\int_0^4 (y+1)(\sqrt{y}+2-2)\,dy$
$=\frac{544}{15}\pi$

771) $2\pi\int_0^1 (3-y)(y^2+1-1)\,dy$
$=\frac{3}{2}\pi$

772) $2\pi\int_0^1 (y+1)y^3\,dy$
$=\frac{9}{10}\pi$

773) $2\pi\int_0^2 (y+3)(-y^2+6-2)\,dy$
$=40\pi$

774) $y=2\ln -x,\ x<0$

775) $y=\frac{1}{x-3}-1,\ x<3$

776) $y=2\ln -x-1,\ x<0$

777) $y=\cos x-1$

778) $y=-\cos x$

779) $y=-\frac{1}{x+2}+1,\ x>-2$

780) $y=\frac{2}{3x^3},\ x>0$

781) $y=2\ln(-x+1)-3,\ x<1$

782) $y=\frac{2}{x-2},\ x<2$

783) $y=\frac{1}{x+3}-3,\ x>-3$

784) $y=3\cos x-2$

785) $y=-\frac{1}{x+1}+1,\ x>-1$

786) $y=\cos x-1$

787) $y=-2\ln x,\ x>0$

788) $y=2\sin x-3$

789) $y=-\frac{1}{x}+2,\ x>0$

790) $y = -\dfrac{1}{x+1} + 3,\ x > -1$

791) $y = -\dfrac{1}{3x^3} + 3,\ x > 0$

792) $y = -\cos x$

793) $y = -\dfrac{1}{x+1} + 1,\ x > -1$

794) $\dfrac{y^3}{3} = x^2 + C_1$

$y = \sqrt[3]{3x^2 + C}$

795) $\dfrac{y^3}{3} = e^x + C_1$

$y = \sqrt[3]{3e^x + C}$

796) $\dfrac{y^3}{3} = \dfrac{x^4}{2} + C_1$

$y = \sqrt[3]{\dfrac{3x^4}{2} + C}$

797) $\dfrac{e^{2y}}{2} = x^2 + C_1$

$y = \dfrac{\ln\left(2x^2 + C\right)}{2}$

798) $\cos y = x + C$

$y = \cos^{-1}\left(x + C\right)$

799) $\dfrac{y^3}{3} = 2e^x + C_1$

$y = \sqrt[3]{6e^x + C}$

800) $\tan y = x + C$

$y = \tan^{-1}\left(x + C\right)$

801) $\sin y = x + C$

$y = \sin^{-1}\left(x + C\right)$

802) $e^y = 3e^x + C$

$y = \ln\left(3e^x + C\right)$

803) $\dfrac{y^3}{3} = x^2 + C_1$

$y = \sqrt[3]{3x^2 + C}$