

1 지수

6 ~ 16쪽

- | | |
|-----------------------------|-------------------------------------|
| 001 a^8 | 002 a^6 |
| 003 $a^{12}b^4$ | 004 $\frac{a^2}{9b^2}$ |
| 005 a^2 | 006 $\frac{1}{a^6}$ |
| 007 $2a^3b^2$ | 008 $3a^5b^9$ |
| 009 $2a^8b^{14}$ | 010 $-1, \frac{1 \pm \sqrt{3}i}{2}$ |
| 011 $\pm 2, \pm 2i$ | 012 $\pm 3, \pm 3i$ |
| 013 -3 | 014 $-1, 1$ |
| 015 $-2\sqrt{2}, 2\sqrt{2}$ | 016 \times |
| 017 \times | 018 \times |
| 019 \bigcirc | 020 \times |
| 021 \bigcirc | 022 4 |
| 023 -5 | 024 0.1 |
| 025 4 | 026 $-\frac{2}{3}$ |
| 027 2 | 028 3 |
| 029 2 | 030 2 |
| 031 3 | 032 13 |
| 033 3 | 034 3 |
| 035 3 | 036 121 |
| 037 32 | 038 2 |
| 039 8 | 040 2 |
| 041 6 | 042 5 |
| 043 a | 044 a^6 |
| 045 a | 046 a^3b^2 |
| 047 ab | 048 1 |
| 049 $\frac{1}{81}$ | 050 $\frac{25}{4}$ |
| 051 $\frac{1}{a}$ | 052 a^2 |
| 053 a^8 | 054 $5^{\frac{1}{2}}$ |
| 055 $3^{\frac{1}{3}}$ | 056 $2^{-\frac{2}{5}}$ |
| 057 $\sqrt[5]{49}$ | 058 $\frac{\sqrt{3}}{9}$ |
| 059 $\frac{\sqrt{3}}{2}$ | 060 81 |
| 061 6 | 062 1 |
| 063 8 | 064 $\frac{25}{36}$ |
| 065 $\frac{3}{5}$ | 066 a^2 |
| 067 $a^{-\frac{11}{6}}$ | 068 1 |
| 069 $a^{\frac{5}{12}}$ | 070 a^2b |
| 071 a^2b | 072 $2^{\sqrt{2}}$ |
| 073 216 | 074 $10^{\sqrt{5}}$ |

- | | |
|---|---|
| 075 49 | 076 9 |
| 077 36 | 078 $a^{2\sqrt{3}}$ |
| 079 $a^{2\sqrt{2}}$ | 080 $a^{\frac{3\sqrt{5}}{2}}$ |
| 081 a^4b^8 | 082 $\frac{a^3}{b}$ |
| 083 $a^{5\sqrt{6}}$ | 084 a^3-b^3 |
| 085 $a-b$ | 086 4 |
| 087 $a-b$ | 088 14 |
| 089 $8\sqrt{3}$ | 090 52 |
| 091 10 | 092 6 |
| 093 80 | 094 $\frac{1}{3}$ |
| 095 $\frac{2}{3}$ | 096 $\frac{34}{7}$ |
| 097 $\frac{13}{4}$ | 098 $\frac{1}{2}$ |
| 099 $\frac{26}{5}$ | 100 4 |
| 101 $\frac{8}{3}$ | 102 256 |
| 103 256 | 104 $\frac{1}{9}$ |
| 105 243 | 106 1 |
| 107 2 | 108 -2 |
| 109 2 | 110 0 |
| 111 0 | 112 $\sqrt[3]{3} > \sqrt[4]{4}$ |
| 113 $\sqrt[4]{3} < \sqrt[6]{6}$ | 114 $\sqrt[3]{2} < \sqrt[3]{3\sqrt{5}}$ |
| 115 $\sqrt[6]{15} < \sqrt[3]{4} < \sqrt{3}$ | 116 $\sqrt[4]{3} < \sqrt[8]{10} < \sqrt{2}$ |
| 117 $\sqrt[4]{6} < \sqrt[3]{5} < \sqrt{3}$ | 119 ③ |
| 118 ⑤ | 121 17 |
| 120 $-4, -2, -1$ | 123 ② |
| 122 24 | 125 8 |
| 124 ② | |

2 로그

17 ~ 28쪽

- | | |
|-----------------------------------|--|
| 126 $4 = \log_2 16$ | 127 $-2 = \log_3 \frac{1}{9}$ |
| 128 $-3 = \log_{\frac{1}{5}} 125$ | 129 $3^3 = 27$ |
| 130 $7^{\frac{1}{2}} = \sqrt{7}$ | 131 $\left(\frac{1}{2}\right)^{-4} = 16$ |
| 132 5 | 133 2 |
| 134 -3 | 135 -4 |
| 136 9 | 137 10 |
| 138 $x > 6$ | 139 $x < 1$ 또는 $x > 3$ |
| 140 $3 < x < 4$ 또는 $x > 4$ | 141 $2 < x < 9$ 또는 $9 < x < 10$ |
| 142 $x > 4$ | 143 $5 < x < 6$ 또는 $6 < x < 7$ |



- 144 0
146 5
148 $\frac{2}{3}$
150 3
152 3
154 0
156 $3a+b$
158 $1-a$
160 $6a-2$
162 1
164 $\frac{3}{2}$
166 4
168 2
170 $\frac{1}{2}$
172 3
174 $\frac{b}{a}$
176 $\frac{3a+b}{2a+b}$
178 $\frac{a+2b}{b}$
180 $2a+b-3c$
182 $\frac{a+b+4c}{3a+6c}$
184 $\frac{6}{5}$
186 $\frac{5}{4}$
188 4
190 1
192 $\frac{15}{4}$
194 5
196 $\frac{5}{3}$
198 -3
200 13
202 1
204 1
206 -2
208 1
210 7
212 3
214 2
216 -6
145 1
147 -1
149 6
151 2
153 1
155 2
157 $3b-3a$
159 $4a+b-3$
161 $-\frac{1}{4}a+\frac{1}{4}b+\frac{1}{4}$
163 $\frac{1}{2}$
165 2
167 4
169 3
171 4
173 3
175 $\frac{6a}{b}$
177 $\frac{2a+b}{1-a}$
179 $2a+3b+c$
181 $\frac{a+2c}{a+b}$
183 $\frac{3a-5b-c}{6a}$
185 $\frac{7}{4}$
187 3
189 4
191 0
193 4
195 8
197 $-\frac{7}{6}$
199 25
201 9
203 1
205 3
207 2
209 1
211 16
213 10
215 -4
217 -2

- 218 $\frac{7}{4}$
220 5
222 $\frac{1}{4}$
224 $\frac{41}{10}$
226 1,7308
228 -1,2692
230 0,398
232 0,4843
234 1,4942
236 -2,4881
238 13자리
240 10째 자리
242 16,3
244 0,000163
246 0,0659
248 8
250 ②
252 1
254 0,5502
219 $\frac{7}{3}$
221 $\frac{7}{6}$
223 $-\frac{3}{2}$
225 $-\frac{1}{3}$
227 3,7308
229 -0,699
231 -1,097
233 2,4786
235 4,5065
237 -3,5186
239 8자리
241 10째 자리
243 1630
245 65,9
247 0,0000659
249 1
251 ①
253 $-\frac{34}{9}$
255 ②

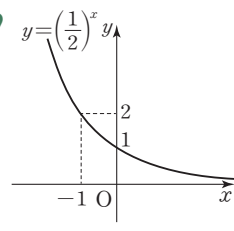
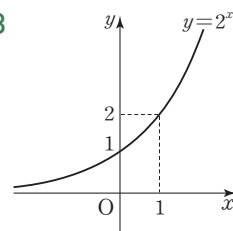
지수함수와 로그함수

3

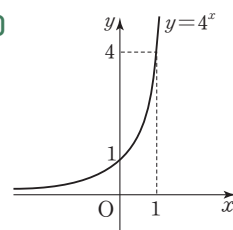
지수함수와 로그함수

29 ~ 41쪽

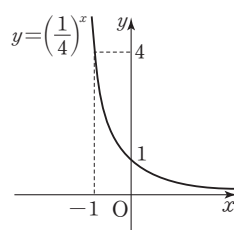
- 256 ○
258 ×
260 ×
262 8
264 32
266 27
268
257 ×
259 ○
261 ○
263 $\frac{1}{4}$
265 $\frac{1}{9}$
267 $\frac{1}{81}$
269



270



271



빠른정답

272 $y=2^{x-2}-1$

274 $y=-3^{x-4}-2$

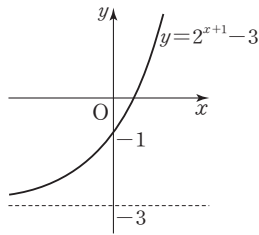
276 $y=-4^{x+2}-3$

278 $y=(\frac{1}{3})^x$

280 $y=-(\frac{1}{5})^x$

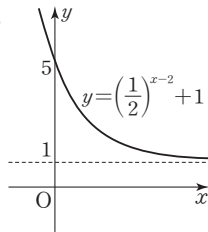
282 $y=-5^x$

283



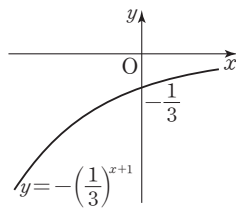
점근선의 방정식:
 $y = -3$

284



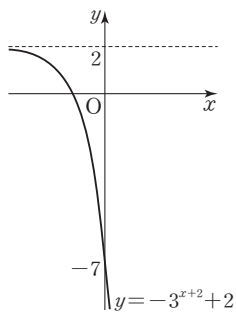
점근선의 방정식:
 $y = 1$

285



점근선의 방정식:
 $y = 0$

286



점근선의 방정식:
 $y = 2$

287 ○

289 ○

291 ×

293 ○

295 ×

297 ×

299 $9^5 > 27^3$

301 $9\sqrt[4]{27} < 27\sqrt[3]{9}$

303 $\frac{1}{\sqrt{2}} > 2^{-\frac{3}{2}} > \sqrt[3]{\frac{1}{32}}$

305 최댓값: 4, 최솟값: $\frac{1}{2}$

307 최댓값: 5, 최솟값: $\frac{7}{2}$

273 $y=(\frac{1}{3})^{x+1}+4$

275 $y=-(\frac{1}{2})^{x+5}+3$

277 $y=-3^x$

279 $y=-(\frac{1}{3})^x$

281 $y=5^x$

288 ×

290 ○

292 ○

294 ×

296 ○

298 ○

300 $\frac{1}{64} > (\sqrt{\frac{1}{8}})^5$

302 $\sqrt[3]{0.2} > \sqrt[4]{0.04}$

304 $0.2^{-\frac{4}{3}} > \sqrt[4]{125} > \sqrt[3]{25}$

306 최댓값: 125, 최솟값: $\frac{1}{5}$

308 최댓값: 5, 최솟값: $\frac{5}{4}$

309 최댓값: $\frac{31}{16}$, 최솟값: -2

311 최댓값: 16, 최솟값: $\frac{1}{32}$

313 최댓값: 3, 최솟값: $\frac{1}{27}$

315 최댓값: 46, 최솟값: -2

317 최댓값: 24, 최솟값: -12

319 $y=\log_{\frac{1}{3}} x$

321 $y=\log_4 x-2$

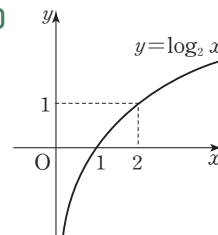
323 $y=\log_3(x-5)+2$

325 -3

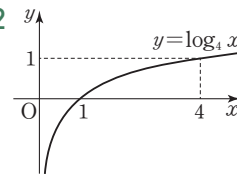
327 -1

329 3

330



332



334 $y=\log_2(x-3)+2$

336 $y=-\log_3(x-5)-2$

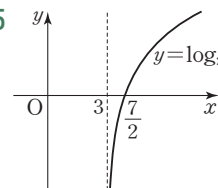
338 $y=-\log_4(x-1)-4$

340 $y=\log_3(-x)$

342 $y=\log_2 x$

344 $y=\log_2(-x)$

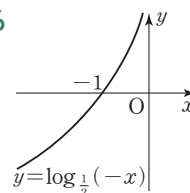
345



정의역:
 $\{x|x>3\}$

점근선의 방정식:
 $x=3$

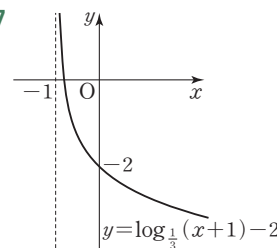
346



정의역:
 $\{x|x<0\}$

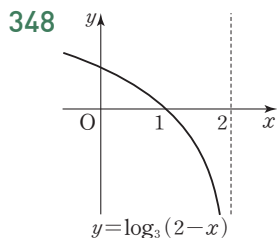
점근선의 방정식:
 $x=0$

347



정의역:
 $\{x|x>-1\}$

점근선의 방정식:
 $x=-1$



정의역:
 $\{x \mid x < 2\}$
 점근선의 방정식:
 $x = 2$

349 ○

351 ○

353 ○

355 ○

357 ○

359 ×

361 $\log_5 6 < \log_5 7$

363 $2 \log_{\frac{1}{3}} 4 > -\log_{\frac{1}{3}} \frac{1}{24}$

365 $2 \log_2 \sqrt{5} > \log_{\frac{1}{2}} \frac{1}{3} > 1$

366 $-2 \log_{\frac{1}{3}} \sqrt{7} > \log_{\frac{1}{3}} \frac{1}{6} > 2 \log_3 2$

367 최댓값: 3, 최솟값: -1

369 최댓값: -3, 최솟값: -6

371 최댓값: -2, 최솟값: -3

373 최댓값: $-\log_3 11$, 최솟값: -3

374 최댓값: 2, 최솟값: 0

375 최댓값: $-\log_5 9$, 최솟값: -2

376 최댓값: 9, 최솟값: 5

378 최댓값: 14, 최솟값: -10

380 ③

382 ④

384 4

386 ①

350 ×

352 ×

354 ○

356 ×

358 ○

360 ○

362 $3 \log_2 5 > 2 \log_4 50$

364 $\log_{\frac{1}{4}} \frac{1}{30} > -3 \log_4 \frac{1}{3}$

368 최댓값: 2, 최솟값: $-\frac{3}{2}$

370 최댓값: 6, 최솟값: 4

372 최댓값: 4, 최솟값: $\log_2 7$

377 최댓값: 13, 최솟값: 4

379 최댓값: 8, 최솟값: -7

381 1

383 ⑤

385 ③

387 17

1. 지수함수와 로그함수

4

지수함수와 로그함수의 활용

42 ~ 50쪽

388 $x = 3$

390 $x = \frac{1}{2}$

392 $x = -12$

394 $x = 1$

396 $x = 1$

398 $x = -3$ 또는 $x = -1$

400 $x = 1$ 또는 $x = 3$

402 $x = 1$ 또는 $x = 2$

404 $x = \frac{1}{2}$ 또는 $x = 2$

389 $x = -3$

391 $x = 10$

393 $x = -5$ 또는 $x = 1$

395 $x = 2$

397 $x = -2$

399 $x = 0$ 또는 $x = 4$

401 $x = 3$ 또는 $x = 4$

403 $x = 4$ 또는 $x = 5$

405 $x > 8$

406 $x < 5$

408 $x < 6$

410 $x \geq \frac{1}{4}$

412 $x \geq 3$

414 $x < -3$

416 $0 < x < \frac{1}{2}$ 또는 $x > 1$

418 $1 < x < 4$

420 $1 < x < \frac{4}{3}$ 또는 $x > 2$

422 1

424 205

426 3년

428 14억 년

430 $x = -3$

432 $x = -2$

434 $x = 2$

436 $x = \frac{1}{3}$ 또는 $x = 27$

438 $x = \frac{1}{9}$ 또는 $x = 27$

440 $x = \frac{\log 3 - 4 \log 2}{2 \log 3 - \log 2}$

442 $x = \frac{1}{2}$ 또는 $x = 64$

444 $x = \frac{1}{125}$ 또는 $x = 5$

446 $-\frac{1}{3} < x < 5$

448 $x > 1$

450 $2 < x < 10$

452 $0 < x < \frac{1}{3}$ 또는 $x > 27$

454 $0 < x < \frac{1}{81}$ 또는 $x > 3$

456 $\frac{1}{3} < x < 27$

458 $\frac{1}{625} < x < 5$

460 $4 < x < 16$

462 $0 < a < 3$ 또는 $a > 27$

464 81

466 $\frac{99}{8}$

468 7년

469 3

471 ④

473 32

475 $4 < a < 8$

407 $x \geq 4$

409 $x > -3$

411 $0 < x < 1$

413 $x > 2$

415 $-1 \leq x \leq 2$

417 $1 \leq x \leq 2$

419 $-1 < x \leq -\frac{2}{3}$ 또는 $x \geq 0$

421 3

423 57

425 18년

427 240시간

429 $x = 6$

431 $x = 2$

433 $x = 4$

435 $x = 2$ 또는 $x = 8$

437 $x = 4$ 또는 $x = 16$

439 $x = \frac{1}{32}$ 또는 $x = 8$

441 $x = \frac{2 \log 5 + \log 2}{3 \log 2 - 2 \log 5}$

443 $x = 3$ 또는 $x = 81$

445 $\frac{3}{2} < x < 6$

447 $3 < x \leq 5$

449 $\frac{5}{3} < x < 2$ 또는 $x > 3$

451 $2 < x < 32$

453 $\frac{1}{32} < x < 2$

455 $\frac{1}{5} < x < 25$

457 $0 < x < 2$ 또는 $x > 32$

459 $1 < x < 9$

461 $\frac{1}{4}$ 또는 32

463 32

465 1600마리

467 2030년

470 ①

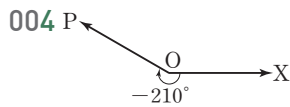
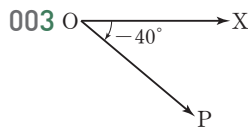
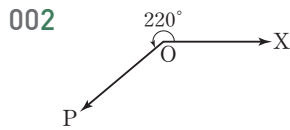
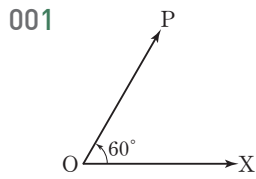
472 20번

474 ③

476 3년

5 삼각함수

52 ~ 61쪽



005 $360^\circ \times n + 30^\circ$

006 $360^\circ \times n + 110^\circ$

007 $360^\circ \times n + 290^\circ$

008 $360^\circ \times n + 60^\circ$

009 $360^\circ \times n + 190^\circ$

010 $360^\circ \times n + 130^\circ$

011 $360^\circ \times n + 300^\circ$

012 제2사분면

013 제1사분면

014 제3사분면

015 제2사분면

016 제3사분면

017 제4사분면

018 $\frac{\pi}{5}$

019 $\frac{3}{4}\pi$

020 $\frac{7}{6}\pi$

021 $-\frac{5}{6}\pi$

022 $-\frac{17}{12}\pi$

023 $-\frac{8}{3}\pi$

024 90°

025 144°

026 330°

027 -135°

028 -200°

029 -900°

030 $2n\pi + \pi$

031 $2n\pi + \frac{3}{4}\pi$

032 $2n\pi + \frac{\pi}{3}$

033 $2n\pi + \frac{11}{6}\pi$

034 $2n\pi + \frac{3}{4}\pi$

035 $2n\pi + \pi$

036 72°

037 225°

038 288°

039 150°

040 $l = 2\pi, S = 4\pi$

041 $l = 4\pi, S = 10\pi$

042 $l = \frac{15}{2}\pi, S = \frac{75}{2}\pi$

043 $r = 3, S = \frac{3}{2}\pi$

044 $r = 6, S = 15\pi$

045 $r = 4, S = \frac{14}{3}\pi$

046 $\theta = \frac{10}{9}\pi, l = \frac{10}{3}\pi$

047 $\theta = \frac{4}{9}\pi, l = 4\pi$

048 $r = 12, \theta = \frac{\pi}{9}$

049 $r = 5, \theta = \frac{5}{3}\pi$

050 $r = 1, l = \frac{3}{2}\pi$

051 $r = 2, l = \frac{20}{11}\pi$

052 최댓값: 4, 반지름의 길이: 2

053 최댓값: $\frac{49}{4}$, 반지름의 길이: $\frac{7}{2}$

054 최댓값: 25, 반지름의 길이: 5

055 최댓값: $\frac{225}{4}$, 반지름의 길이: $\frac{15}{2}$

056 최댓값: 121, 반지름의 길이: 11

057 $\sin \theta = \frac{12}{13}, \cos \theta = \frac{5}{13}, \tan \theta = \frac{12}{5}$

058 $\sin \theta = -\frac{3}{5}, \cos \theta = \frac{4}{5}, \tan \theta = -\frac{3}{4}$

059 $\sin \theta = \frac{\sqrt{3}}{2}, \cos \theta = -\frac{1}{2}, \tan \theta = -\sqrt{3}$

060 $\sin \theta = -\frac{2\sqrt{2}}{3}, \cos \theta = \frac{1}{3}, \tan \theta = -2\sqrt{2}$

061 $\sin \theta = -\frac{\sqrt{2}}{2}, \cos \theta = -\frac{\sqrt{2}}{2}, \tan \theta = 1$

062 $\sin \theta = \frac{\sqrt{3}}{2}, \cos \theta = -\frac{1}{2}, \tan \theta = -\sqrt{3}$

063 $\sin \theta = -\frac{\sqrt{2}}{2}, \cos \theta = \frac{\sqrt{2}}{2}, \tan \theta = -1$

064 $\sin \theta = \frac{\sqrt{2}}{2}, \cos \theta = -\frac{\sqrt{2}}{2}, \tan \theta = -1$

065 $\sin \theta = -\frac{\sqrt{3}}{2}, \cos \theta = \frac{1}{2}, \tan \theta = -\sqrt{3}$

066 $\sin \theta = -\frac{1}{2}, \cos \theta = -\frac{\sqrt{3}}{2}, \tan \theta = \frac{\sqrt{3}}{3}$

067 $\sin \theta > 0, \cos \theta < 0, \tan \theta < 0$

068 $\sin \theta > 0, \cos \theta > 0, \tan \theta > 0$

069 $\sin \theta < 0, \cos \theta < 0, \tan \theta > 0$

070 $\sin \theta < 0, \cos \theta > 0, \tan \theta < 0$

071 $\sin \theta > 0, \cos \theta < 0, \tan \theta < 0$

072 $\sin \theta < 0, \cos \theta > 0, \tan \theta < 0$

073 제3사분면

074 제1사분면 또는 제3사분면

075 제2사분면 또는 제3사분면

076 $\tan \theta$

077 $\tan \theta$

078 $-\cos \theta$

079 $\cos \theta = -\frac{1}{2}, \tan \theta = -\sqrt{3}$

080 $\sin \theta = -\frac{3}{5}, \tan \theta = \frac{3}{4}$

081 $\sin \theta = \frac{12}{13}, \tan \theta = \frac{12}{5}$

082 $\cos \theta = \frac{2\sqrt{2}}{3}, \tan \theta = -\frac{\sqrt{2}}{4}$

083 2

084 1

085 $\frac{2}{\cos \theta}$

086 2

087 $-\frac{4}{9}$

088 $\pm \frac{\sqrt{17}}{3}$

089 $\pm \frac{\sqrt{17}}{9}$

090 $-\frac{9}{4}$

091 $\frac{13}{27}$

092 $-\frac{\sqrt{6}}{2}$

093 $\frac{\sqrt{35}}{5}$

094 $\frac{4}{3}$

095 $\frac{15}{8}$

096 $-\frac{8}{3}$

097	육십분법	-320°	-252°	140°	1440°
	호도법	$-\frac{16}{9}\pi$	$-\frac{7}{5}\pi$	$\frac{7}{9}\pi$	8π

098 ④

100 ④

102 3

104 1

099 4

101 ④

103 $\frac{\sqrt{2}}{3}$

II. 삼각함수

62 ~ 74쪽

6 삼각함수의 그래프

105 ○

107 ×

109 ×

111 ×

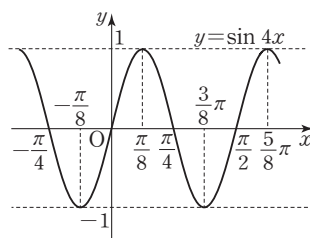
113 ○

115 ×

117 ○

119 ○

120

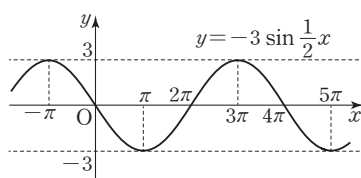


최댓값: 1

최솟값: -1

주기: $\frac{\pi}{2}$

121

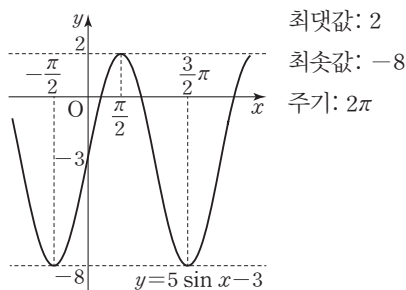


최댓값: 3

최솟값: -3

주기: 4π

122

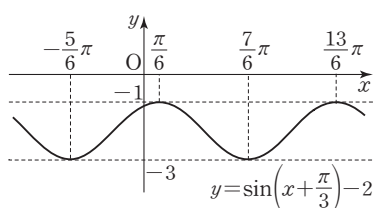


최댓값: 2

최솟값: -8

주기: 2π

123

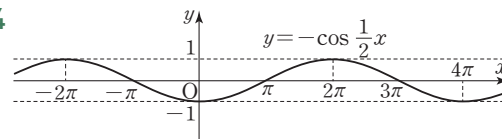


최댓값: -1

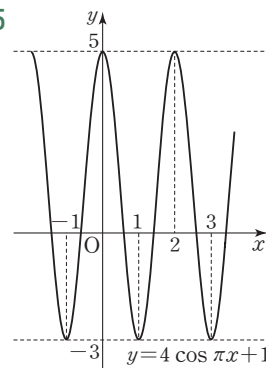
최솟값: -3

주기: 2π

124

최댓값: 1, 최솟값: -1, 주기: 4π

125

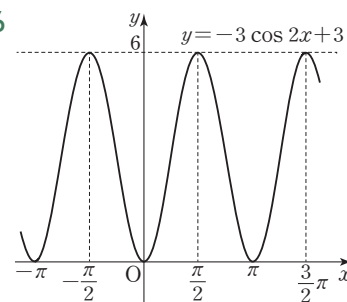


최댓값: 5

최솟값: -3

주기: 2

126

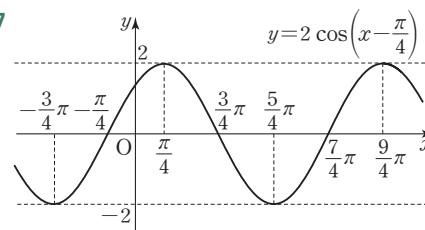


최댓값: 6

최솟값: 0

주기: π

127

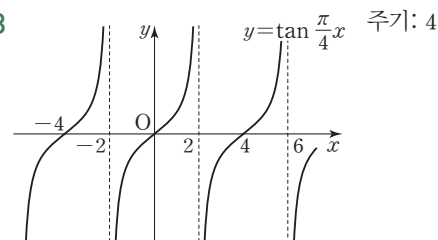


최댓값: 2

최솟값: -2

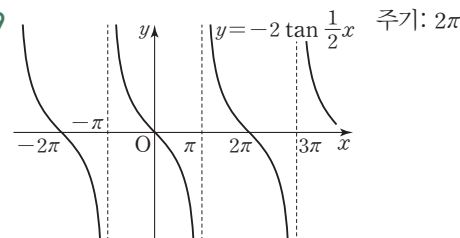
주기: 2π

128

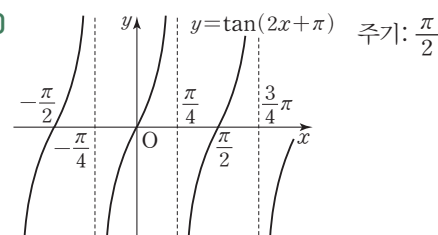


주기: 4

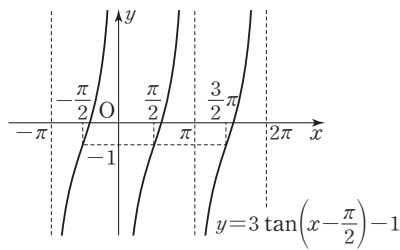
129

주기: 2π

130

주기: $\frac{\pi}{2}$

131



주기: π

132 $x = 3n\pi + \frac{3}{2}\pi$ (단, n 은 정수)

133 $x = \frac{n}{4}\pi + \frac{\pi}{8}$ (단, n 은 정수)

134 $x = n\pi + \frac{\pi}{6}$ (단, n 은 정수)

135 $x = n\pi + \frac{2}{3}\pi$ (단, n 은 정수)

136 $a = 2, b = 2, c = 3$

137 $a = 1, b = \frac{1}{2}, c = 1$

138 $a = 1, b = 2, c = -3$

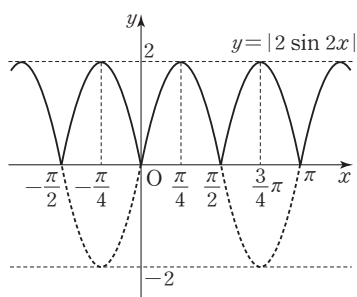
139 $a = 3, b = \frac{1}{2}, c = -\sqrt{3}$

140 $a = 2, b = \frac{1}{2}, c = 2$

141 $a = 3, b = 2, c = \pi$

142 $a = 1, b = 2, c = \sqrt{3}$

143

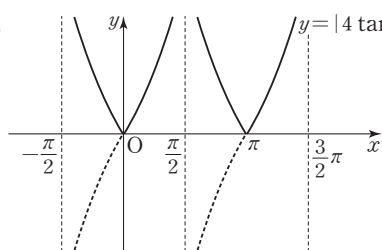


최댓값: 2

최솟값: 0

주기: $\frac{\pi}{2}$

144

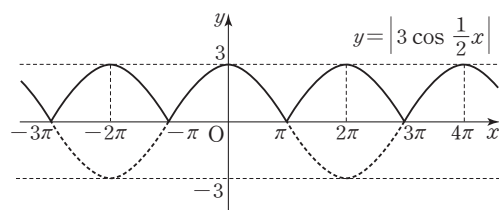


최댓값: 없다.

최솟값: 0

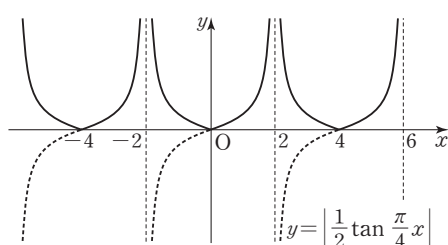
주기: π

145



최댓값: 3, 최솟값: 0, 주기: 2π

146



최댓값: 없다.

최솟값: 0

주기: 4

147 $\frac{\sqrt{3}}{2}$

149 1

151 $\frac{1}{2}$

153 $-\frac{\sqrt{2}}{2}$

155 $-\frac{\sqrt{3}}{3}$

157 $\frac{\sqrt{3}}{2}$

159 $-\frac{\sqrt{3}}{2}$

161 $-\frac{\sqrt{3}}{3}$

163 $-\frac{\sqrt{3}}{2}$

165 $\frac{\sqrt{2}}{2}$

167 $-\frac{\sqrt{3}}{3}$

169 $\frac{\sqrt{3}}{2}$

171 $-1 - \sqrt{3}$

173 $\frac{7\sqrt{3}}{4}$

175 1

177 1

179 최댓값: -1, 최솟값: -5

181 최댓값: 5, 최솟값: 3

183 최댓값: 5, 최솟값: 1

185 최댓값: $\frac{25}{4}$, 최솟값: 4

187 $x = \frac{\pi}{4}$ 또는 $x = \frac{3}{4}\pi$

189 $x = \frac{2}{3}\pi$ 또는 $x = \frac{4}{3}\pi$

191 $x = \frac{2}{3}\pi$

193 $x = \frac{\pi}{3}$ 또는 $x = \pi$

195 $x = \frac{\pi}{4}$ 또는 $x = \frac{5}{4}\pi$

196 $x = 0$ 또는 $x = \pi$ 또는 $x = \frac{7}{6}\pi$ 또는 $x = \frac{11}{6}\pi$

197 $x = \pi$

198 $x = \frac{\pi}{4}$ 또는 $x = \frac{\pi}{3}$ 또는 $x = \frac{5}{4}\pi$ 또는 $x = \frac{4}{3}\pi$

199 $0 \leq x < \frac{\pi}{3}$ 또는 $\frac{2}{3}\pi < x < 2\pi$

200 $\frac{\pi}{6} \leq x \leq \frac{5}{6}\pi$

148 $\frac{\sqrt{3}}{2}$

150 $\frac{\sqrt{2}}{2}$

152 $\sqrt{3}$

154 $\frac{1}{2}$

156 $-\frac{1}{2}$

158 -1

160 $-\frac{\sqrt{2}}{2}$

162 $\frac{\sqrt{2}}{2}$

164 $\sqrt{3}$

166 $-\frac{1}{2}$

168 $\frac{\sqrt{3}}{2}$

170 1

172 $\frac{1}{2}$

174 $\frac{5}{6} + \frac{\sqrt{2}}{2}$

176 $-2 \cos \theta$

178 $2 \tan \theta$

180 최댓값: 3, 최솟값: -5

182 최댓값: 8, 최솟값: 2

184 최댓값: 3, 최솟값: -5

186 최댓값: 2, 최솟값: -2

188 $x = \frac{4}{3}\pi$ 또는 $x = \frac{5}{3}\pi$

190 $x = \frac{\pi}{6}$ 또는 $x = \frac{11}{6}\pi$

192 $x = \frac{\pi}{6}$

194 $x = \frac{\pi}{8}$ 또는 $x = \frac{7}{8}\pi$



201 $0 \leq x < \frac{3}{4}\pi$ 또는 $\frac{5}{4}\pi < x < 2\pi$

202 $\frac{\pi}{6} \leq x \leq \frac{11}{6}\pi$

204 $0 \leq x < \frac{\pi}{6}$ 또는 $\frac{\pi}{2} < x < \pi$

206 $0 \leq x < \frac{\pi}{12}$ 또는 $\frac{17}{12}\pi < x < 2\pi$

207 $\frac{\pi}{12} < x < \frac{\pi}{3}$

208 $\frac{\pi}{6} < x < \frac{\pi}{2}$ 또는 $\frac{\pi}{2} < x < \frac{5}{6}\pi$

209 $\frac{\pi}{3} \leq x \leq \frac{5}{3}\pi$

211 ⑤

213 ④

215 9

217 ④

203 $\frac{\pi}{3} \leq x < \frac{\pi}{2}$

205 $0 \leq x \leq \frac{\pi}{3}$

210 $0 < x < \frac{\pi}{6}$ 또는 $\pi < x < \frac{7}{6}\pi$

212 ③

214 6

216 ④

218 ①

II. 삼각함수

7

사인법칙과 코사인법칙

75 ~ 80쪽

219 $3\sqrt{3}$

221 $4\sqrt{2}$

223 45°

225 2

227 $4\sqrt{3}$

229 45° 또는 135°

231 $5 : 6 : 7$

233 $1 : \sqrt{2} : \sqrt{3}$

235 1

237 $\sqrt{2}$

239 $2\sqrt{7}$

241 45°

243 60°

245 1

247 $\frac{\sqrt{3}}{6}$

249 $\frac{7}{8}$

251 120°

253 $a=c$ 인 이등변삼각형

255 $B=90^\circ$ 인 직각삼각형

257 3

259 3

220 $2\sqrt{2}$

222 60° 또는 120°

224 30°

226 $2\sqrt{3}$

228 3

230 $2 : 3 : 4$

232 $1 : 3 : 3$

234 $1 : \sqrt{3} : 2$

236 $\sqrt{29}$

238 $2\sqrt{21}$

240 $\sqrt{19}$

242 120°

244 $\frac{1}{2}$

246 $\frac{\sqrt{2}}{2}$

248 $\frac{3}{4}$

250 60°

252 $a=b$ 인 이등변삼각형

254 $a=b$ 인 이등변삼각형

256 $a=b$ 인 이등변삼각형

258 10

260 $2\sqrt{2}$

261 $12\sqrt{5}$

263 $6\sqrt{3}$

265 6

267 $2\sqrt{3}$

269 $13\sqrt{3}$

271 ⑤

273 ②

275 50

277 5

262 $2\sqrt{14}$

264 15

266 12

268 $6\sqrt{2}$

270 $9\sqrt{3}$

272 ④

274 $\frac{5}{8}$

276 $a=c$ 인 이등변삼각형

278 40

III. 수열

8

등차수열과 등비수열

82 ~ 93쪽

001 4, 7, 10, 13

003 $1, \frac{1}{3}, \frac{1}{5}, \frac{1}{7}$

005 $a_n = \frac{1}{n^2}$

007 $a_n = 2n - 5$

009 $a_n = 7n - 10$

011 $a_n = -8n + 19$

013 $a_n = 2n + 7$

015 $a_n = -5n + 21$

017 36

019 -10

021 -27

023 14, 17, 20

025 -7, -3, 1

027 16, 10, 4, -2

029 $x=8$

031 $x=10, y=22$

033 $x=-5, y=1, z=7$

035 1, 3, 5

037 -7, 1, 9

039 -10, -4, 2, 8

041 126

043 104

045 497

047 96

049 282

051 276

053 49

055 148

057 -136

002 1, 3, 7, 15

004 $a_n = 4n$

006 $a_n = n(n+1)$

008 $a_n = -4n + 9$

010 $a_n = 5n - 17$

012 $a_n = 6n - 8$

014 $a_n = -3n + 20$

016 $a_n = 3n - 14$

018 27

020 71

022 2

024 -10, -13, -16

026 13, 20, 27, 34

028 -4, 1, 6, 11

030 $x=13$

032 $x=6, y=-10$

034 $x=14, y=4, z=-6$

036 -4, -1, 2

038 1, 5, 9, 13

040 -5, -3, -1, 1

042 -110

044 -114

046 -80

048 -290

050 165

052 768

054 51

056 -92

058 -108

빠른정답

- 059 $a_n = 2n - 5$ 060 $a_n = 6n - 1$
 061 $a_1 = 0, a_n = 2n - 4 (n \geq 2)$ 062 $a_1 = 1, a_n = 4n - 6 (n \geq 2)$
 063 $a_n = 2^{n-1}$ 064 $a_n = 3 \times 5^{n-1}$
 065 $a_n = 7 \times \left(\frac{1}{2}\right)^{n-1}$ 066 $a_n = 3 \times (-2)^{n-1}$
 067 $a_n = (\sqrt{5})^{n+1}$ 068 $a_n = 2 \times 3^{n-2}$
 069 $a_n = -3 \times (-2)^{n-1}$ 070 $a_n = (\sqrt{2})^n$
 071 $a_n = (-1)^n$ 072 $a_n = \left(\frac{1}{2}\right)^{n-9}$
 073 320 074 $\frac{3}{64}$
 075 $-\frac{1}{81}$ 076 81
 077 $-\frac{\sqrt{5}}{25}$ 078 $96\sqrt{2}$
 079 20, 40, 80 080 6, 2, $\frac{2}{3}$
 081 $3\sqrt{3}, 9, 9\sqrt{3}$ 082 3, 9, 27, 81
 083 12, 6, 3, $\frac{3}{2}$ 084 -6, 12, -24, 48
 085 $x = -15$ 또는 $x = 15$
 086 $x = -\frac{1}{4}, y = -4$ 또는 $x = \frac{1}{4}, y = 4$
 087 $x = -21, y = -189$ 또는 $x = 21, y = 189$
 088 $\sqrt{6}$ 089 9
 090 2 091 2, 4, 8
 092 -3, 1, 9 093 1, 4, 16
 094 -6, 3, 12 095 120
 096 $3^{10} - 1$ 097 -728
 098 $\frac{2}{3} \times \left\{1 - \left(\frac{1}{2}\right)^{12}\right\}$ 099 511
 100 $27 \times \left\{1 - \left(\frac{2}{3}\right)^7\right\}$ 101 168
 102 112 103 260
 104 182 105 255
 106 86 107 $a_n = 4 \times 5^{n-1}$
 108 $a_n = \frac{1}{3} \times \left(\frac{2}{3}\right)^{n-1}$ 109 $a_1 = 9, a_n = 2^{n+1} (n \geq 2)$
 110 $a_1 = \frac{15}{16}, a_n = \frac{3}{4} \times \left(\frac{1}{4}\right)^n (n \geq 2)$
 111 4 112 $18 \times \left(\frac{1}{2}\right)^{10}$
 113 $\left(\frac{1}{4}\right)^8$ 114 1122만 원
 115 1100만 원 116 3502만 원
 117 3400만 원
 118 ① 119 87
 120 -10 121 ①
 122 ④ 123 18
 124 ④ 125 -6

수열

94 ~ 104쪽

9

수열의 합과 수학적 귀납법

- 126 $\sum_{k=1}^n (3k-1)$ 127 $\sum_{k=1}^n \frac{1}{3k+1}$
 128 $\sum_{k=1}^6 4$ 129 $\sum_{k=1}^{15} 2^k$
 130 $\sum_{k=1}^{99} k(k+1)$ 131 $3+3^2+3^3+\cdots+3^n$
 132 $2+4+6+\cdots+2n$
 133 $4 \times 5 + 5 \times 6 + 6 \times 7 + \cdots + (n+1)(n+2)$
 134 $1 + \frac{1}{2} + \frac{1}{3} + \cdots + \frac{1}{10}$ 135 $7+11+15+\cdots+47$
 136 80 137 -50
 138 60 139 -30
 140 12 141 178
 142 48 143 30
 144 1160 145 542
 146 972 147 $-\frac{1024}{625}$
 148 $n(n+4)$ 149 740
 150 $\frac{n(n+1)(2n+13)}{6}$ 151 5456
 152 $\frac{n(n+1)(n-1)(n+2)}{4}$ 153 6380
 154 $\frac{2n(n+1)(2n+1)}{3}$ 155 1330
 156 $\frac{(n-3)(n+4)}{2}$ 157 200
 158 $\frac{n(n+1)(n+2)}{3}$ 159 806
 160 $\frac{n(n+1)(n+2)(3n+5)}{12}$ 161 6050
 162 $\frac{n(n+1)(n+2)}{6}$ 163 $\frac{n(n+1)(n+2)}{3}$
 164 $\frac{n^2(n+1)}{2}$ 165 $\frac{n}{n+1}$
 166 $\frac{13}{30}$ 167 $\frac{n}{2n+1}$
 168 $\frac{169}{480}$ 169 $\frac{n}{3n+1}$
 170 $\frac{n(3n+5)}{4(n+1)(n+2)}$ 171 $\frac{n}{2n+1}$
 172 $\frac{2n}{n+1}$ 173 $\sqrt{n+1}-1$
 174 $5\sqrt{2}$ 175 $\frac{\sqrt{2n+1}-1}{2}$
 176 $2\sqrt{2}$ 177 2
 178 $\frac{(2n-1) \times 3^{n+1} + 3}{4}$ 179 $\frac{2 \times 4^{13} + 1}{9}$
 180 $3 - \frac{2n+3}{2^n}$ 181 $\frac{21}{4} + \frac{1}{4 \times 3^{11}}$
 182 42 183 3



184 437

186 8

188 $a_n = 2n - 5$

190 $a_n = 2n - 1$

192 $a_n = (-5)^{n-1}$

194 $a_n = \left(\frac{1}{3}\right)^{n-2}$

196 $a_n = 3^{n-2}$

198 $a_n = \frac{-n^2 + n + 4}{2}$

200 817

202 $a_n = -\frac{2}{n(n+1)}$

204 $-\frac{5\sqrt{22}}{44}$

205 3, 1, $(k+1)^2$, $(k+1)^2$, $(k+1)^2$, $2k+3$

206 풀이 참조

208 풀이 참조

209 $2h, 2h, 1+h, 1+h, k+1, k+1$

210 풀이 참조

212 풀이 참조

213 ②

215 142

217 ①

219 ②

185 $\frac{2}{9}$

187 $a_n = 4n - 3$

189 $a_n = -3n + 7$

191 $a_n = -3n + 8$

193 $a_n = 2^{n+1}$

195 $a_n = (-2)^{n-1}$

197 $a_n = n^2 - n + 1$

199 -2337

201 $a_n = n + 1$

203 120

207 풀이 참조

211 풀이 참조

214 91

216 $\sqrt{3}$

218 40

9종 교과서 필수 문제

1 지수

106 ~ 107쪽

1 ②

2 ④

3 22

4 ①

5 2

6 $a^2 - b^2$

7 5

8 ⑤

9 ③

10 ④

11 0

12 ⑤

2 로그

108 ~ 109쪽

1 81

2 ⑤

3 -4

4 ②

5 ④

6 18

7 ④

8 ②

9 ④

10 0.8188

11 16째 자리

12 2.5배

3 지수함수와 로그함수

110 ~ 111쪽

1 ①

2 ⑤

3 3

4 ⑤

5 ④

6 1

7 ①

8 ②

9 ①

10 1

11 2

12 1

4 지수함수와 로그함수의 활용

112 ~ 113쪽

1 2

2 ②

3 ②

4 ④

5 9

6 8

7 ⑤

8 10

9 ③

10 63

11 ⑤

12 16년

5 삼각함수

114 ~ 115쪽

1 ⑤

2 ③

3 ②

4 ③

5 ①

6 10000 m²

7 ①

8 ⑤

9 ③

10 ④

11 ①

12 ③

6 삼각함수의 그래프

116 ~ 117쪽

1 ④

2 $\neg, \sqcup, \sqcap, \sqsupset$

3 6π

4 ④

5 -1

6 ③

7 ⑤

8 ④

9 $x=0$ 또는 $x=\frac{4}{3}\pi$

10 ①

11 ④

12 $\frac{3}{4}\pi \leq \theta \leq \frac{5}{4}\pi$

7 사인법칙과 코사인법칙

118 ~ 119쪽

1 ⑤

2 ④

3 ①

4 ①

5 ③

6 120°

7 $a=b$ 인 이등변삼각형

8 60°

9 ②

10 150°

11 ③

12 ①

8 등차수열과 등비수열

120 ~ 121쪽

1 $a_n = 4n + 2$

2 ①

3 ②

4 ⑤

5 ④

6 10

7 ③

8 ③

9 5

10 6

11 ⑤

12 200명

9 수열의 합과 수학적 귀납법

122 ~ 123쪽

1 430

2 ①

3 28

4 2

5 55

6 ②

7 80

8 552

9 ⑤

10 ①

11 16

12 236