01 / 삼각비 8~25쪽

0001 $\sin A=\frac{12}{13}$, $\cos A=\frac{5}{13}$, $\tan A=\frac{12}{5}$

0002 $\sin C=\frac{5}{13}$, $\cos C=\frac{12}{13}$, $\tan C=\frac{5}{12}$ 0003 $\sqrt{5}$

0004 $\sin B=\frac{2\sqrt{5}}{5}$, $\cos B=\frac{\sqrt{5}}{5}$, $\tan B=2$ 0005 4

0006 $3\sqrt{7}$ 0007 6 0008 1 0009 $\frac{\sqrt{3}}{2}$ 0010 $\frac{1}{2}$ 0011 $\frac{3}{2}$

0012 60° 0013 45° 0014 30° 0015 $x=2$, $y=2\sqrt{3}$

0016 $x=2$, $y=2\sqrt{2}$ 0017 $x=6$, $y=3$ 0018 $\overline{AB}$

0019 $\overline{OB}$ 0020 $\overline{CD}$ 0021 $\overline{OB}$ 0022 $\overline{AB}$ 0023 0.7193

0024 0.6947 0025 1.0355 0026 0.6947

0027 0.7193 0028 1 0029 1 0030 0 0031 $\frac{3}{2}$

0032 < 0033 > 0034 < 0035 < 0036 >

0037 0.2419 0038 0.9563 0039 0.2679

0040 17 0041 16 0042 14

0043 ③ 0044 $\frac{19}{20}$ 0045 $\frac{2\sqrt{5}}{5}$ 0046 $\frac{2}{3}$ 0047 12

0048 ② 0049 $\frac{5}{6}$ 0050 ② 0051 $\frac{6}{7}$ 0052 6 0053 ④

0054 $\frac{12}{5}$ 0055 $\frac{6}{5}$ 0056 ⑤ 0057 $\frac{\sqrt{3}}{2}$ 0058 ⑤ 0059 $\frac{16}{15}$

0060 $\frac{2\sqrt{5}}{9}$ 0061 $\frac{\sqrt{6}}{3}$ 0062 $\sqrt{2}$ 0063 ④ 0064 $\frac{\sqrt{10}}{30}$

0065 $\frac{12}{13}$ 0066 ③ 0067 ③, ⑤ 0068 $\frac{1}{2}$ 0069 ④

0070 $4\sqrt{3}$ 0071 ② 0072 15° 0073 $\sqrt{2}$ 0074 20° 0075 $2\sqrt{3}$

0076 ⑤ 0077 $6\sqrt{3}$ 0078 ③ 0079 4 cm

0080 $12+8\sqrt{3}$ 0081 $\frac{9\sqrt{3}}{2}$ 0082 ① 0083 $\sqrt{2}-1$

0084 $2+\sqrt{3}$ 0085 $y=\sqrt{3}x+2\sqrt{3}$ 0086 ②

0087 $y=x+5$ 0088 ③ 0089 ②, ③

0090 0.6536 0091 $\frac{1}{4}$ 0092 ② 0093 ①, ⑤

0094 ⑤ 0095 ④, ⑤

0096 $\tan 0°$, $\sin 35°$, $\cos 35°$, $\tan 45°$, $\tan 70°$ 0097 ⑤

0098 ④ 0099 $\frac{\sqrt{2}}{4}$ 0100 69° 0101 0.7095 0102 22°

0103 60.18 0104 9.325 0105 0.8693

0106 $\frac{2\sqrt{5}}{9}$ 0107 ① 0108 $\frac{32}{15}$ 0109 $\frac{23}{17}$ 0110 ④

0111 ② 0112 ① 0113 10° 0114 $\frac{9\sqrt{6}}{2}$ 0115 $\sqrt{2}-1$

0116 $y=\frac{\sqrt{3}}{3}x+4$ 0117 ③ 0118 ③ 0119 ②

0120 0.1051 0121 $\frac{3}{4}$ 0122 $6\sqrt{3}\,\text{cm}^2$ 0123 $\frac{8}{17}$

0124 $\frac{3+\sqrt{5}}{2}$ 0125 $\frac{5\sqrt{3}}{9}$ 0126 $\frac{\sqrt{3}}{3}$ 0127 ⑤

02 / 삼각비의 활용 26~41쪽

0128 (1) 8, 4 (2) 8, $4\sqrt{3}$ 0129 (1) 5, 5 (2) 5, $5\sqrt{2}$

0130 1.54 0131 2.56 0132 11.9

0133 $3\sqrt{3}$, 6, 3, 6, $3\sqrt{3}$, $3\sqrt{7}$

0134 $2\sqrt{2}$, $2\sqrt{2}$, $4\sqrt{2}$ 0135 (1) $\frac{\sqrt{3}}{3}h$ (2) h (3) $3-\sqrt{3}$

0136 (1) $\sqrt{3}h$ (2) h (3) $4(\sqrt{3}+1)$ 0137 5 0138 $12\sqrt{3}$

0139 (가) $\frac{1}{2}ab$ (나) $ab\sin x$ 0140 $28\sqrt{3}$ 0141 $30\sqrt{2}$

0142 (가) $\frac{1}{2}$ (나) $\frac{1}{2}ab$ 0143 $60\sqrt{2}$ 0144 8

0145 ②, ⑤ 0146 7.99 0147 ⑤

0148 $128\sqrt{3}\,\text{cm}^3$ 0149 ③ 0150 $9\sqrt{3}\pi\,\text{cm}^3$ 0151 5.4 m

0152 ① 0153 $12\sqrt{3}$ m 0154 $15(\sqrt{3}+3)$ m 0155 50 m

0156 ① 0157 $\sqrt{19}$ 0158 ④ 0159 $3\sqrt{17}$ 0160 $2\sqrt{17}$

0161 ④ 0162 $5\sqrt{6}$ 0163 $4\sqrt{2}$ cm 0164 ③

0165 $10\sqrt{6}$ m 0166 $3\sqrt{3}$ 0167 $75(\sqrt{3}-1)$ m 0168 ④

0169 $16(3-\sqrt{3})\,\text{cm}^2$ 0170 $5\sqrt{3}$ 0171 ④

0172 $36(3+\sqrt{3})$ 0173 ② 0174 6 cm 0175 45°

0176 ① 0177 $48\sqrt{3}\,\text{cm}^2$ 0178 $\frac{40\sqrt{3}}{9}$ 0179 ②

0180 10 cm 0181 ② 0182 $(16\pi-12\sqrt{3})\,\text{cm}^2$

0183 ③ 0184 $7\sqrt{3}\,\text{cm}^2$ 0185 ① 0186 $72\sqrt{2}\,\text{cm}^2$

0187 $32\sqrt{2}\,\text{cm}^2$ 0188 45° 0189 ③ 0190 ③ 0191 60°

0192 $36\sqrt{3}\,\text{cm}^2$

0193 7.5 0194 $36\sqrt{3}\,\text{cm}^3$ 0195 ⑤ 0196 $2\sqrt{13}$ cm

0197 ② 0198 $9(3-\sqrt{3})$ m 0199 100 0200 ①

0201 $52\sqrt{3}$ 0202 135° 0203 $16\sqrt{3}\,\text{cm}^2$

0204 ④ 0205 ③ 0206 $12\sqrt{3}\,\text{cm}^2$ 0207 ①

0208 $6\sqrt{3}$ m 0209 $9(\sqrt{3}-1)\,\text{cm}^2$ 0210 $\frac{9\sqrt{3}}{10}$

0211 $60\sqrt{3}\,\text{cm}^2$ 0212 초속 $25(\sqrt{3}-1)$ m 0213 ③

0214 $\frac{3}{5}$

03 / 원과 직선 44~61쪽

0215 5 0216 14 0217 (1) $3\sqrt{3}$ cm (2) $6\sqrt{3}$ cm 0218 8

0219 $2\sqrt{5}$ 0220 9 0221 3 0222 4 0223 6 0224 $4\sqrt{6}$

0225 5 0226 140° 0227 60° 0228 11 0229 $2\sqrt{10}$

0230 55° 0231 80° 0232 6 0233 9

0234 (1) 13 (2) $\overline{AD}=5-r$, $\overline{BD}=12-r$ (3) 2 0235 6

0236 5

0237 13 cm 0238 $4\sqrt{21}$ 0239 ③

0240 16π cm 0241 5 0242 ① 0243 $\frac{25}{2}$ 0244 12 cm

0245 ① 0246 2 cm 0247 $100\pi\,\text{cm}^2$ 0248 ①

0249 ④ 0250 6 cm 0251 4π cm 0252 ③

0253 ④ 0254 ② 0255 $12\sqrt{2}$ cm 0256 68°

0257 $9\sqrt{2}\,\text{cm}^2$ 0258 ① 0259 4 cm

0260 $13\pi\,\text{cm}^2$ 0261 ⑤ 0262 $6\sqrt{3}$ cm

0263 $4\sqrt{21}$ cm 0264 ④ 0265 $25\pi\,\text{cm}^2$

0266 $8\sqrt{2}$ cm 0267 ④ 0268 3 0269 ③ 0270 ④

0271 $25\pi\,\text{cm}^2$ 0272 3 cm 0273 ③ 0274 9

0275 10 0276 ③ 0277 12 cm 0278 ②

0279 $40\,\text{cm}^2$ 0280 ③ 0281 ⑤ 0282 5 cm

0283 8 cm 0284 4 cm 0285 ③ 0286 6 cm

0287 2 cm 0288 ④ 0289 $(6-2\sqrt{3})$ cm 0290 ③

0291 $\frac{35}{2}$ cm 0292 $72\,\text{cm}^2$ 0293 ①

0294 20 cm 0295 1 cm

0296 $48\pi\,\text{cm}^2$ 0297 ② 0298 30π cm

0299 $12\sqrt{3}\pi$ 0300 ① 0301 ④ 0302 $16\pi\,\text{cm}^2$

0303 9 cm 0304 ① 0305 28 cm

0306 $(2\sqrt{15}+16)$ cm 0307 ④ 0308 ②

0309 10 cm 0310 30 cm 0311 26°

0312 $26\sqrt{10}\,\text{cm}^2$ 0313 4 cm

0314 ⑤ 0315 $10\sqrt{6}\,\text{cm}^2$ 0316 9 cm 0317 ③

04 / 원주각 62~75쪽

0318 50° 0319 36° 0320 110° 0321 55° 0322 50° 0323 260°

0324 30° 0325 25° 0326 $\angle x=50°$, $\angle y=40°$

0327 $\angle x=60°$, $\angle y=33°$ 0328 $\angle x=35°$, $\angle y=35°$

0329 $\angle x=43°$, $\angle y=86°$ 0330 65° 0331 30° 0332 25

0333 30 0334 4 0335 7 0336 45 0337 20 0338 6

0339 9

0340 ⑤ 0341 47° 0342 $16\,\text{cm}^2$ 0343 ④ 0344 ③

0345 160° 0346 ② 0347 306° 0348 ② 0349 58° 0350 ①

0351 116° 0352 40° 0353 ③ 0354 70° 0355 25° 0356 53°

0357 ③ 0358 55° 0359 ⑤ 0360 ② 0361 ④ 0362 12°

0363 50° 0364 ③ 0365 $\frac{\sqrt{5}}{3}$ 0366 $(18+6\sqrt{3})$ cm

0367 $2\sqrt{13}$ cm 0368 ② 0369 $\frac{3}{5}$ 0370 40° 0371 ⑤

0372 52° 0373 ③ 0374 30° 0375 28° 0376 ⑤ 0377 36°

0378 4 cm 0379 ③ 0380 50° 0381 35 cm

0382 20π cm 0383 56° 0384 ① 0385 15 cm

0386 7π cm 0387 ④

0388 60° 0389 ⑤ 0390 50° 0391 $\angle x=40°$, $\angle y=60°$

0392 ③ 0393 ⑤ 0394 125° 0395 ③ 0396 ② 0397 68°

0398 ㄴ과 ㄹ 0399 ② 0400 $x=20$, $y=9$

0401 ⑤ 0402 100° 0403 24° 0404 42° 0405 $144\pi\,\text{cm}^2$

0406 ② 0407 $\angle x=30°$, $\angle y=100°$ 0408 ① 0409 30°

05 / 원주각의 활용 76~89쪽

0410 40° 0411 35° 0412 85° 0413 55° 0414 75° 0415 70°

0416 85° 0417 68° 0418 55° 0419 65° 0420 50° 0421 130°

0422 56° 0423 113° 0424 50° 0425 75°

0426 $\angle x=35°$, $\angle y=120°$ 0427 $\angle x=70°$, $\angle y=50°$

0428 ②, ④ 0429 70° 0430 89° 0431 120° 0432 ⑤

0433 110° 0434 54° 0435 ④ 0436 58° 0437 ⑤ 0438 125°

0439 152° 0440 ③ 0441 130° 0442 360° 0443 ① 0444 35°

0445 92° 0446 $\angle x=95°$, $\angle y=100°$ 0447 160° 0448 ⑤

0449 ㄱ, ㅁ 0450 ㄴ, ㄹ, ㅂ 0451 ③ 0452 40°

0453 50° 0454 ⑤ 0455 4° 0456 ① 0457 72° 0458 40°

0459 ③ 0460 ② 0461 103° 0462 110° 0463 15° 0464 ①

0465 58° 0466 ③ 0467 3 cm 0468 72° 0469 ④

0470 76° 0471 150° 0472 45° 0473 8 cm

0474 ① 0475 160° 0476 20° 0477 70° 0478 56°

0479 ②, ⑤ 0480 ③ 0481 ① 0482 80° 0483 ③

0484 42° 0485 ① 0486 46° 0487 58° 0488 ⑤

0489 $36\pi\,\text{cm}^2$ 0490 40° 0491 $6\sqrt{3}$

0492 10 cm 0493 70° 0494 58° 0495 ③

자르는 선

06 / 산포도 92~103쪽

0496 9 0497 1, −2, 0, −3, 4

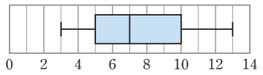
0498

학생	A	B	C	D	E
대여한 책(권)	3	7	6	7	2
편차(권)	−2	2	1	2	−3

0499 −3 0500 4 0501 −7 0502 0 0503 −4 0504 18
0505 $3\sqrt{2}$ g 0506 4개 0507 5 0508 $\sqrt{5}$개
0509 4반 0510 5반
0511 160 cm 0512 ① 0513 −1.5 0514 ②
0515 12 0516 ④ 0517 분산: 4, 표준편차: 2개 0518 ⑤
0519 1 0520 3.6 0521 ③ 0522 ③ 0523 7.6 0524 ②
0525 ⑤ 0526 −5 0527 ③ 0528 ① 0529 ③ 0530 ④
0531 ③ 0532 1 0533 ㄴ, ㄷ 0534 ③ 0535 7.6
0536 $\sqrt{10}$ 0537 ⑤ 0538 ①, ④ 0539 ④
0540 C반 0541 ④ 0542 모둠 B, 모둠 A, 모둠 C
0543 ㄱ, ㄷ
0544 ② 0545 $\frac{46}{3}$ 0546 ② 0547 ② 0548 45 0549 ③
0550 ④ 0551 ⑤ 0552 14 0553 $\frac{38}{15}$ 0554 13 0555 ③
0556 ② 0557 ④, ⑤ 0558 82 cm
0559 평균: 7, 표준편차: 3 0560 지역 B
0561 $\sqrt{24.8}$점 0562 ③ 0563 ④ 0564 $\sqrt{6}$

07 / 상자그림과 산점도 104~119쪽

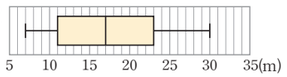
0565 7, 7, 6, 5, 8, 9
0566 제1사분위수: 6, 제2사분위수: 8, 제3사분위수: 11
0567 제1사분위수: 3, 제2사분위수: 7, 제3사분위수: 8.5
0568 제1사분위수: 12, 제2사분위수: 15.5, 제3사분위수: 19
0569 제1사분위수: 8, 제2사분위수: 10.5, 제3사분위수: 14
0570



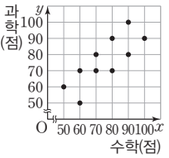
0571 (단위: m)

최솟값	제1사분위수	중앙값	제3사분위수	최댓값
7	11	17	23	30

0572



0573 최솟값: 1회, 최댓값: 15회
0574 제1사분위수: 4회, 제2사분위수: 8회, 제3사분위수: 10회
0575 25 % 0576 ㉢ 0577 ㉣
0578



0579 8명 0580 4명 0581 4명 0582 5명 0583 ㄷ, ㅁ
0584 ㄱ, ㄹ 0585 ㄴ, ㅂ 0586 양 0587 음
0588 양 0589 × 0590 음 0591 ×
0592 ② 0593 6 kg 0594 ② 0595 14 0596 1 0597 ⑤
0598 ④ 0599 4 0600 ②, ⑤ 0601 60점
0602 50 % 0603 85점 0604 ㄴ, ㄷ
0605 ⑤ 0606 여행지 B 0607 ④ 0608 ㄴ, ㄹ
0609 ④ 0610 35 % 0611 ⑤ 0612 9명 0613 60
0614 ④ 0615 ② 0616 37.5 % 0617 5점 0618 ②
0619 ③, ⑤ 0620 ③ 0621 ③, ⑤ 0622 ④
0623 ③ 0624 ⑤ 0625 ① 0626 ③ 0627 ④
0628 13점 0629 B 0630 3 0631 ㄷ, ㄹ
0632 ③ 0633 40 % 0634 ③ 0635 ④ 0636 ③
0637 ④ 0638 ②, ④ 0639 ④ 0640 15
0641 상자 A 0642 35 %
0643 B 0644 24점 0645 1명 0646 ㄴ, ㄷ

기출 BOOK

01 / 삼각비 2~5쪽

1 ③ 2 $\frac{\sqrt{15}}{7}$ 3 ④ 4 $\frac{1}{5}$ 5 ⑤ 6 $\frac{17}{13}$
7 ② 8 ② 9 $\frac{\sqrt{3}}{3}$ 10 $\frac{\sqrt{6}}{3}$ 11 $\frac{43}{20}$ 12 ③
13 ⑤ 14 2 15 $5\sqrt{3}+5$ 16 $\sqrt{7}$ 17 ④
18 $\frac{\sqrt{6}+\sqrt{2}}{4}$ 19 ④ 20 ⑤ 21 1 22 ③
23 ⑤ 24 92.5144 25 1.6384

02 / 삼각비의 활용 6~9쪽

1 1.64 2 ③, ⑤ 3 $48\sqrt{3}$ cm^2 4 ③ 5 186 m
6 6.3 m 7 14.4 m 8 ② 9 $5\sqrt{7}$ m 10 $24\sqrt{6}$ m
11 ③ 12 $3(3+\sqrt{3})$ 13 ③ 14 5 cm 15 ③
16 $4(\sqrt{3}-1)$ cm^2 17 15 18 ④ 19 $4(\sqrt{3}+3)$ cm^2
20 7 cm^2 21 ④ 22 120° 23 ⑤ 24 $30\sqrt{3}$
25 ③

03 / 원과 직선 10~13쪽

1 ㈎ ∠OMB ㈏ $\overline{OB}$ ㈐ $\overline{OM}$ ㈑ RHS ㈒ $\overline{BM}$
2 3 cm 3 ② 4 ④ 5 48 cm^2 6 10 cm 7 ⑤
8 16 9 16π cm^2 10 50° 11 ① 12 $4\sqrt{3}$
13 $6\sqrt{3}$ 14 2 15 8 16 ③ 17 $24\sqrt{3}$ cm
18 ② 19 $\sqrt{35}$ cm 20 8 cm 21 2 cm 22 ④
23 10 cm 24 ④ 25 $\frac{8}{3}$ cm

04 / 원주각 14~17쪽

1 36° 2 8 cm 3 ③ 4 105° 5 55° 6 ③
7 50° 8 ① 9 75° 10 ② 11 53° 12 14°
13 30° 14 ⑤ 15 8π 16 $\frac{7}{5}$
17 $(16\pi-12\sqrt{3})$ cm^2 18 ② 19 ③ 20 ①
21 180° 22 ④ 23 ⑤ 24 ③ 25 45°

05 / 원주각의 활용 18~21쪽

1 35° 2 105° 3 ④ 4 55° 5 ③ 6 ③
7 ⑤ 8 44° 9 84° 10 ③, ⑤ 11 ③
12 100° 13 ⑤ 14 34° 15 65° 16 80°
17 $\angle x=45°$, $\angle y=63°$ 18 50° 19 ② 20 40°
21 33° 22 ① 23 148° 24 55° 25 ①

06 / 산포도 22~25쪽

1 ② 2 ① 3 25 4 ⑤
5 분산: $\frac{8}{3}$, 표준편차: $\frac{2\sqrt{6}}{3}$회 6 ③ 7 ④
8 ④ 9 ② 10 49 11 11π 12 ③ 13 ②
14 7 15 3 16 ③ 17 ① 18 ②, ⑤
19 A, C, B 20 ③, ④

07 / 상자그림과 산점도 26~29쪽

1 ① 2 1.5회 3 1 4 ④ 5 ③ 6 ⑤
7 80점 8 ②, ④ 9 ②, ⑤ 10 25 % 11 ㄴ, ㄷ 12 ⑤
13 (1) 6명 (2) 4명 14 ④ 15 44 % 16 ③
17 양의 상관관계 18 ⑤ 19 E 20 ④