

10.4 | 연습문제 정답

01. (a) $(\sqrt{5}, \tan^{-1}(-2) + \pi + 2n\pi), (-\sqrt{5}, \tan^{-1}(-2) + 2n\pi), (n \text{은 정수})$

(b) $(5, \tan^{-1}(\frac{4}{3}) + 2n\pi), (-5, \tan^{-1}(\frac{4}{3}) + \pi + 2n\pi)$

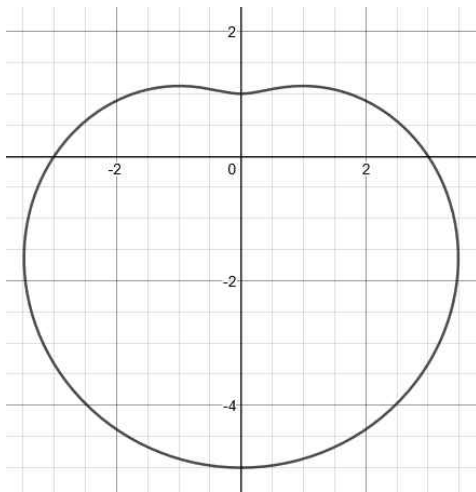
02. (a) $(\frac{\sqrt{2}}{2}, \frac{\sqrt{6}}{2})$

(b) $(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{6}}{2})$

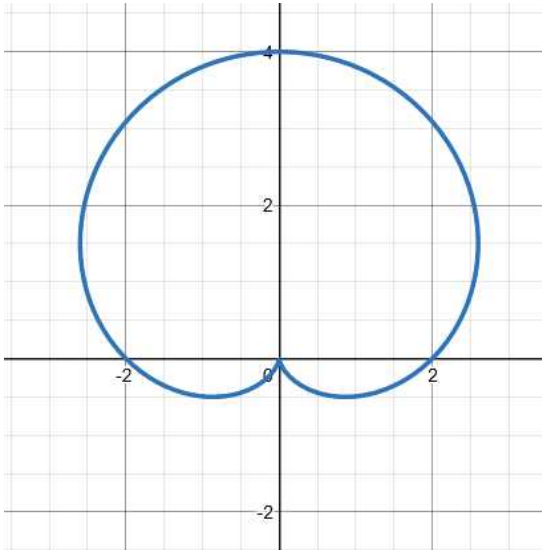
(c) $(-2\sqrt{3}, 2)$

(d) $(5, 1)$

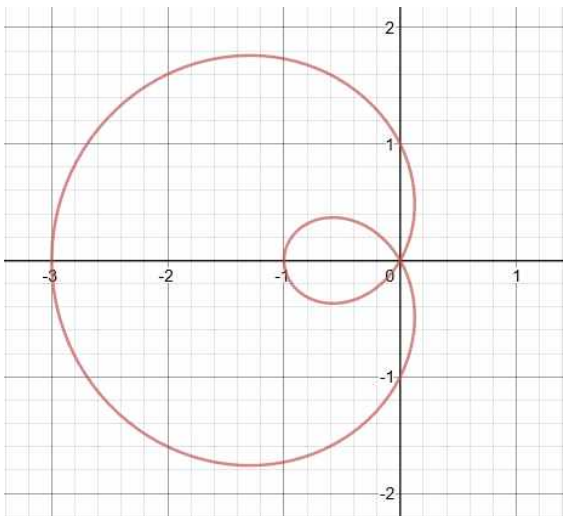
03. $r = 3 - 2\sin\theta, 0 \leq \theta \leq 2\pi$



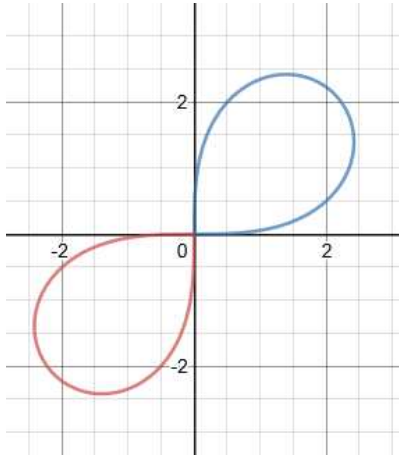
04. $r = 2 + 2\sin\theta, 0 \leq \theta \leq 2\pi$



05. $r = 1 - 2\cos\theta, 0 \leq \theta \leq 2\pi$



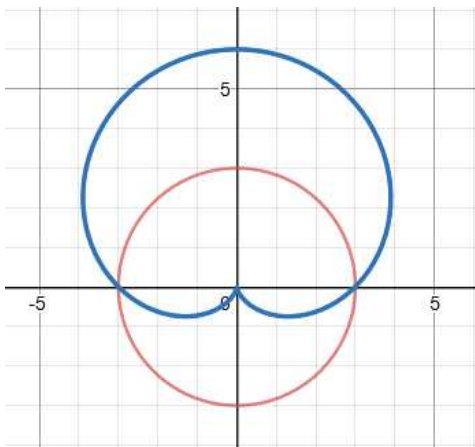
06. $r^2 = 9 \sin(2\theta), 0 \leq \theta \leq \frac{\pi}{2}$



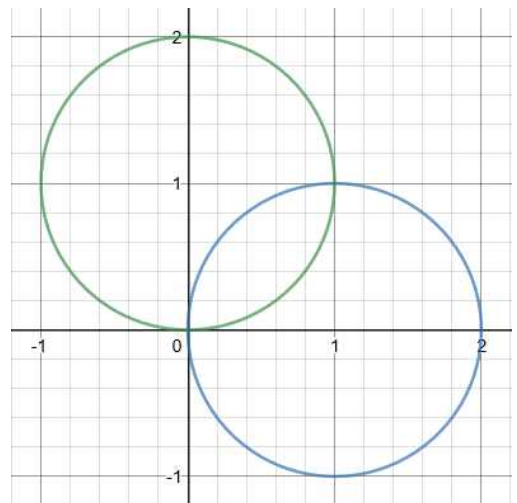
$r = 3\sqrt{\sin 2\theta}$
 $0 \leq \theta \leq \frac{1}{2}\pi$

$r = -3\sqrt{\sin 2\theta}$
 $0 \leq \theta \leq \frac{1}{2}\pi$

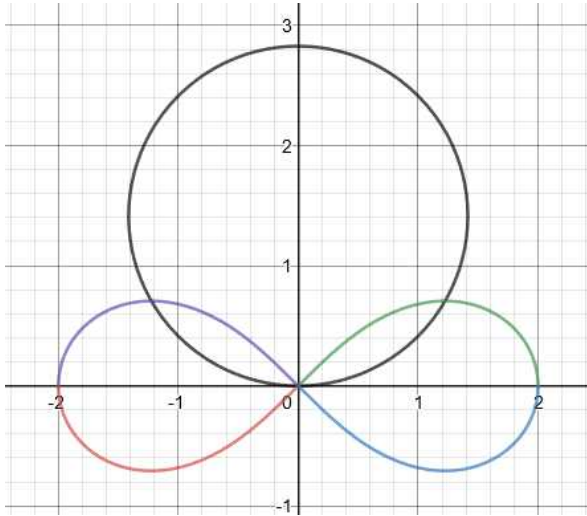
07. $(3, 0), (-3, \pi)$



08. 극점, $\left(\sqrt{2}, \frac{\pi}{4}\right)$



09. 극점, $\left(\sqrt{2}, \frac{\pi}{6}\right), \left(\sqrt{2}, \frac{5\pi}{6}\right)$



8. $r = 2\sqrt{2} \sin \theta$
 $0 \leq \theta \leq \pi$

9. $r = -2\sqrt{\cos 2\theta}$
 $0 \leq \theta \leq \frac{1}{4}\pi$

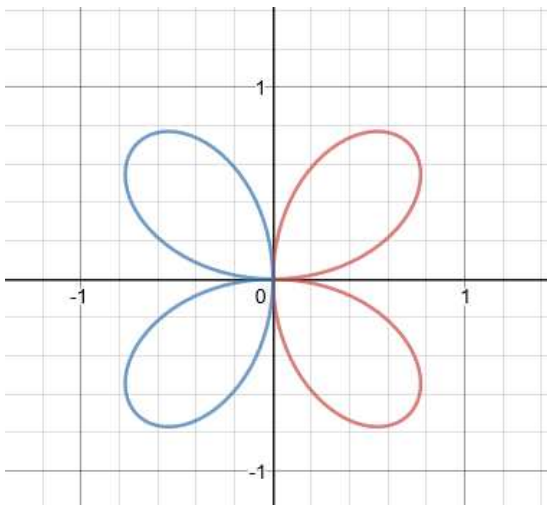
10. $r = -2\sqrt{\cos 2\theta}$
 $\frac{3}{4}\pi \leq \theta \leq \pi$

11. $r = 2\sqrt{\cos 2\theta}$
 $0 \leq \theta \leq \frac{1}{4}\pi$

12. $r = 2\sqrt{\cos 2\theta}$
 $\frac{3}{4}\pi \leq \theta \leq \pi$

10. $(x^2 + y^2)^2 = a(x^2 - y^2)$

11. $r = 0$ (극) 또는 $r^2 = \sin^2 2\theta$



4. $r = \sin 2\theta$
 $0 \leq \theta \leq \pi$

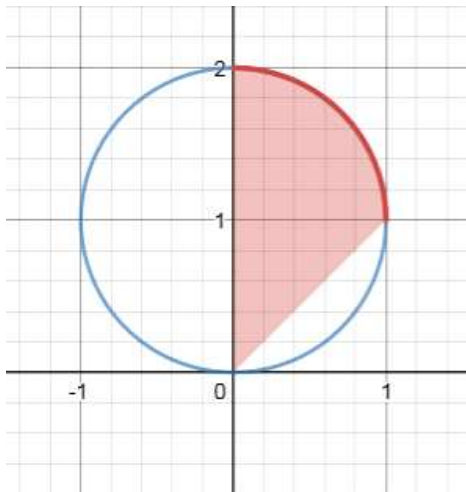
5. $r = -\sin 2\theta$
 $0 \leq \theta \leq \pi$

12. $\left(\frac{3\sqrt{3}}{2}, \frac{\pi}{3}\right), \left(-\frac{3\sqrt{3}}{2}, \frac{5}{3}\pi\right), (0, 0)$

13. $(2, 0), (2, 2\pi), (0, 0)$

14. $\left(2, \frac{\pi}{12}\right), \left(2, \frac{5\pi}{12}\right), \left(2, \frac{7\pi}{12}\right), \left(2, \frac{11\pi}{12}\right), \left(2, \frac{13\pi}{12}\right), \left(2, \frac{17\pi}{12}\right), \left(2, \frac{19\pi}{12}\right), \left(2, \frac{21\pi}{12}\right)$

15.



붉은색 라인 부분에 해당함.