1. 두 함수 $f(x) = 2x + 1$, $g(x) = -3x + 2$ 의 합성함수 $g \circ f$ 를 구하면 무엇인가?

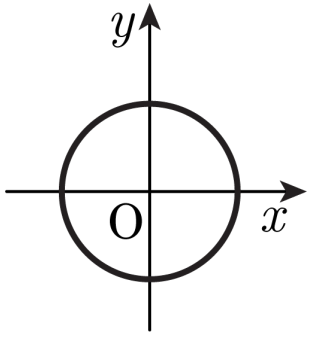
① $y = -6x - 1$ ② $y = -6x$ ③ $y = -6x + 1$

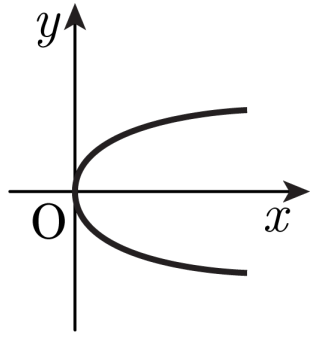
④ $y = -6x + 3$ ⑤ $y = -6x + 5$

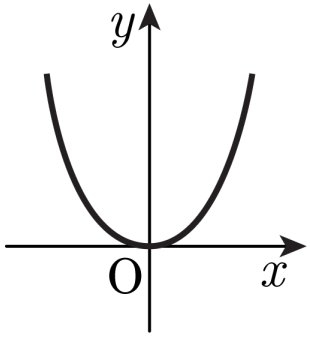
2. 두 함수 $f(x)=x^2-x$, $g(x)=2x+1$에 대하여 $(f\circ g\circ f)(1)$의 값은?

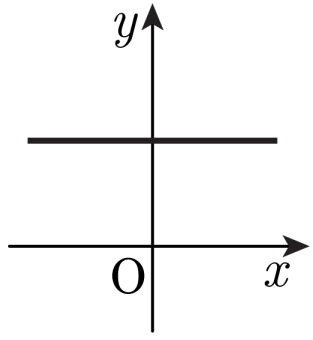
① -2 ② -1 ③ 0 ④ 1 ⑤ 2

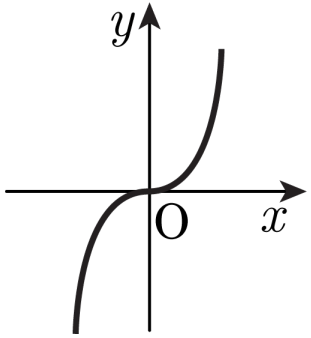
3. 다음 그래프 중 역함수가 존재하는 함수의 그래프가 될 수 있는 것은?

① 

② 

③ 

④ 

⑤ 

4. 다음 함수 $y = 2x - 5\ (x \geq 1)$ 의 역함수를 구하면?

① $y = 2x - 5$

② $y = 2x - 5(x \geq 1)$

③ $y = \frac{1}{2}x + \frac{5}{2}$

④ $y = \frac{1}{2}x + \frac{5}{2}(x \geq 1)$

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

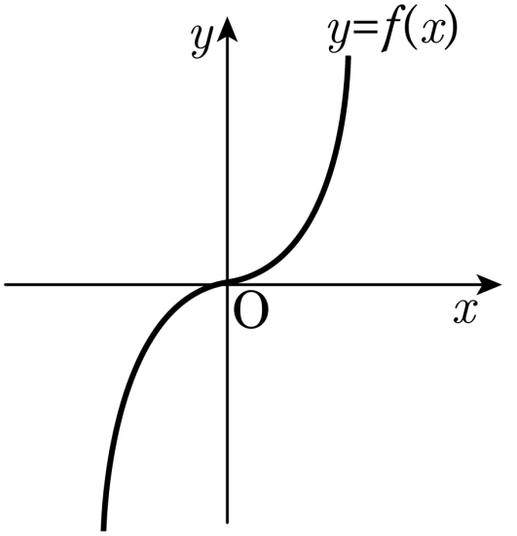
5. 함수 $f(x) = 2ax - a + 2$에 대하여 $f^{-1}(-7) = 2$일 때, 상수 a의 값은 얼마인가?

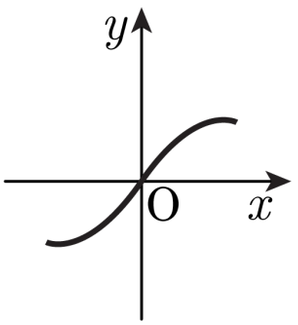
① -5 ② -3 ③ -1 ④ 1 ⑤ 3

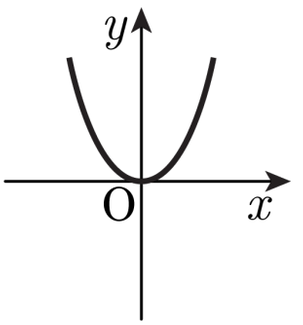
6. 함수 $f(x) = 2x - 5$ 의 역함수를 $y = f^{-1}(x)$ 라 할 때, $f^{-1}(-3)$ 의 값은 얼마인가?

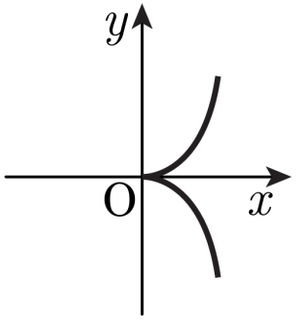
① -3 ② -1 ③ 0 ④ 1 ⑤ 3

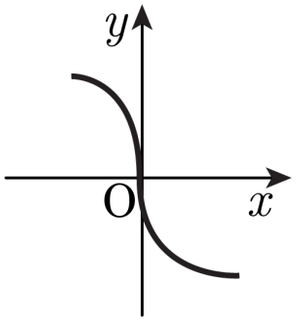
7. 함수 $y=f(x)$ 의 그래프가 그림과 같을 때, 다음 중 $y=f^{-1}(x)$ 의 그래프로 적당한 것은 무엇인가?

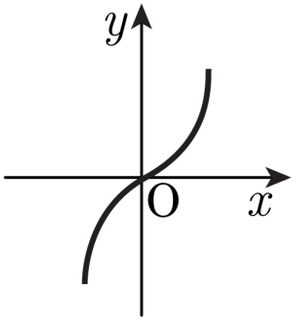


① 

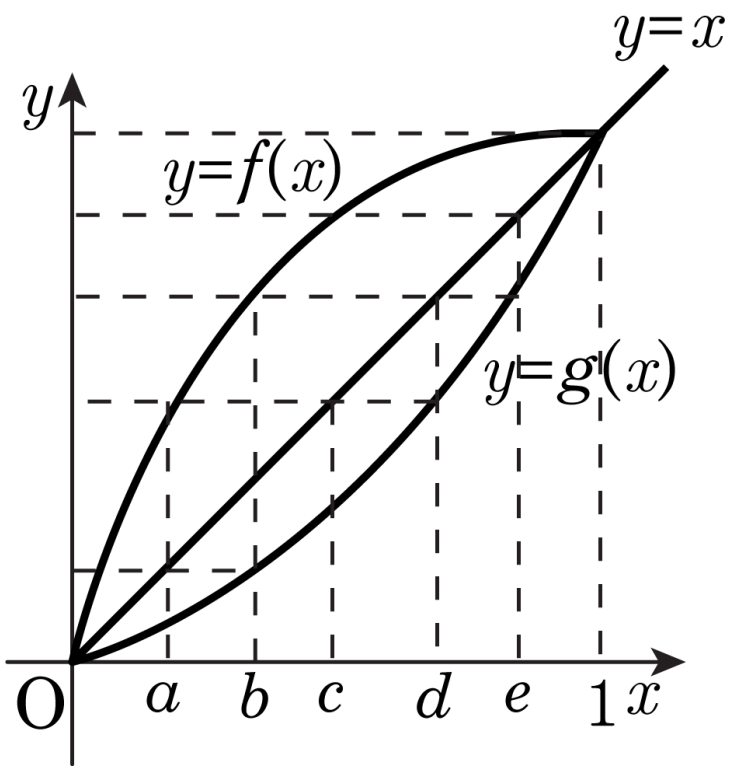
② 

③ 

④ 

⑤ 

8. 집합 $A = \{x|0 \le x \le 1\}$에 대하여 A에서 A로의 함수 $y = f(x)$와 $y = g(x)$의 그래프가 아래 그림과 같을 때, $(f \circ g \circ f^{-}1)(d)$의 값은 얼마인가?

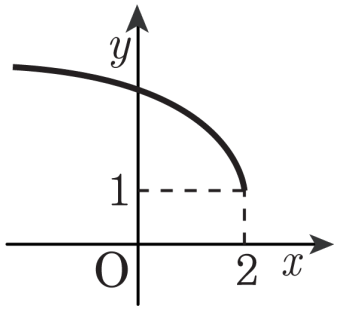


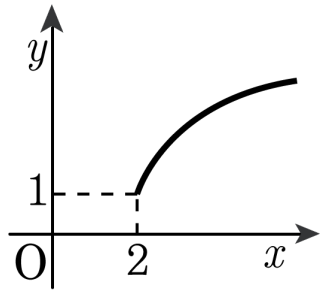
① a ② b ③ c ④ d ⑤ e

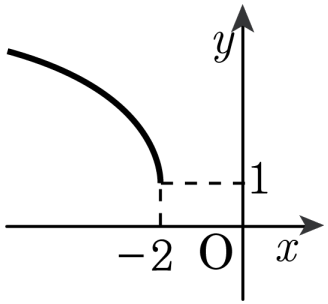
9. $y = \dfrac{3x-1}{x-1}$ 의 점근선의 방정식은 $x = 1, y = a$ 이다. a 의 값은?

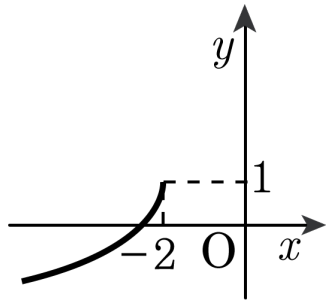
① 2 ② 3 ③ 4 ④ -1 ⑤ -2

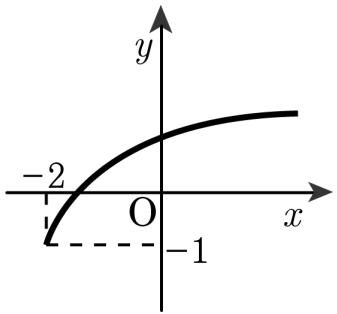
10. 함수 $y = 2\sqrt{-3x+6} + 1$ 의 그래프는?

① 

② 

③ 

④ 

⑤ 

11. 다음 중 평행이동 또는 대칭이동에 의하여 $y = \sqrt{-x}$의 그래프와 겹쳐질 수 없는 것은?

① $y = -\sqrt{1-x} + 1$

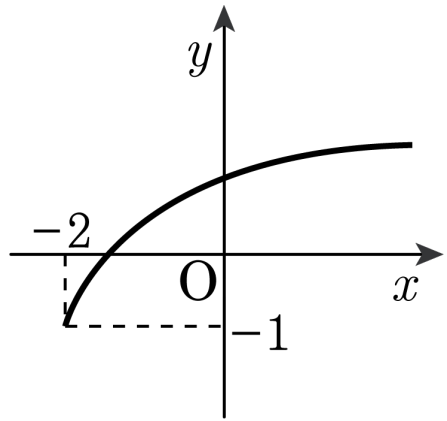
② $y = \sqrt{x} - 1$

③ $y = \sqrt{x-1} + 3$

④ $y = -\sqrt{-x+2} + 2$

⑤ $y = \sqrt{-2x+1} - 1$

12. 다음 그래프는 $y = \sqrt{x}$ 의 그래프를 평행 이동한 것이다. 이 그래프의 함수는?



① $y = \sqrt{x-2} + 1$

② $y = \sqrt{x-2} - 1$

③ $y = \sqrt{x+2} + 1$

④ $y = \sqrt{x+2} - 1$

⑤ $y = -\sqrt{x-2} - 1$

13. 두 함수 $f(x) = -\sqrt{2x+1}+4$, $g(x) = \sqrt{5-x}+3$ 에 대하여 $(g \circ f)(4)$ 의 값을 구하면?

① 1 ② 2 ③ 3 ④ 4 ⑤ 5

14. 함수 $f(x) = \sqrt{x-1} + 2$ 에서 $f^{-1}(4)$ 의 값은?

① 4 ② 5 ③ 6 ④ 7 ⑤ 8