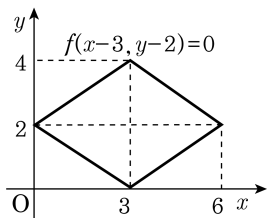
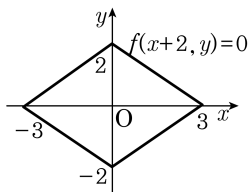


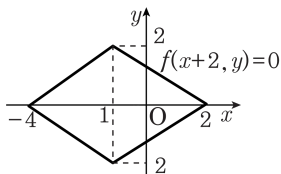
1. 방정식 $f(x-3, y-2) = 0$ 이 나타내는 도형이 다음 그림과 같을 때 방정식 $f(x+2, y) = 0$ 이 나타내는 도형을 좌표 평면 위에 바르게 나타낸 것은?



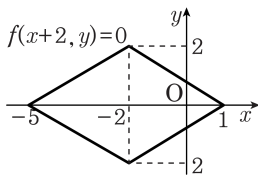
①



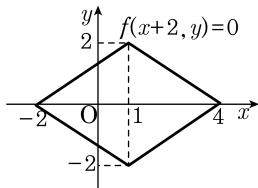
②



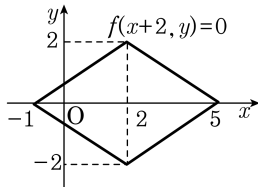
③



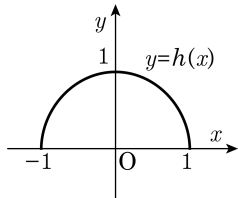
④



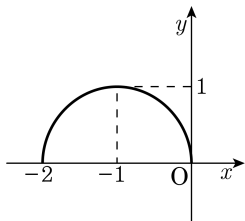
⑤



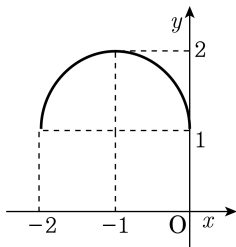
2. 함수 $y = f(x)$ 에 대하여 $g(x) = f(x-2)+1$,
 $h(x) = g(x+1)-2$ 라고 할 때, $y = h(x)$ 의
 그래프는 그림과 같이 중심이 원점이고 반지
 름의 길이가 1 인 원의 일부이다. 이 때, 다음
 중 $y = f(x)$ 의 그래프로 옳은 것은?



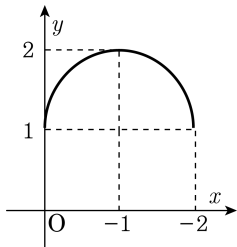
①



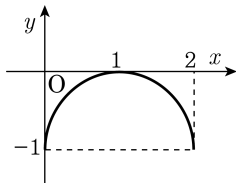
②



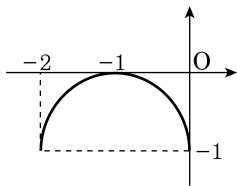
③



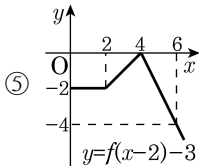
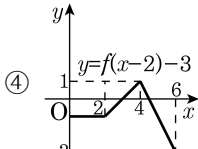
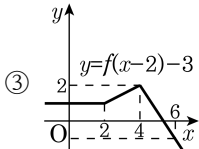
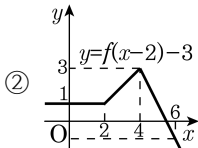
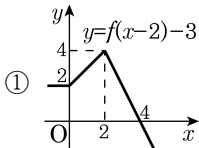
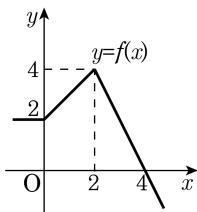
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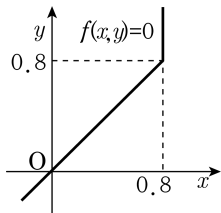
⑤



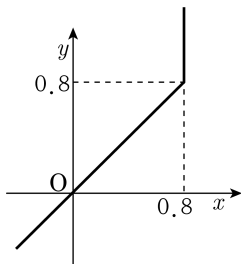
3. 방정식 $y = f(x)$ 가 나타내는 도형이 오른쪽 그림과 같을 때, 방정식 $y = f(x-2) - 3$ 이 나타내는 도형을 좌표평면 위에 바르게 나타낸 것은?



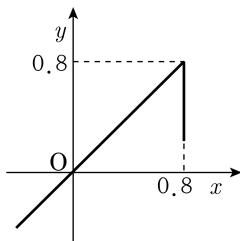
4. 방정식 $f(x, y) = 0$ 이 나타내는 도형이 오른쪽 그림과 같을 때, $f(-y, -x) = 0$ 이 나타내는 도형을 좌표평면 위에 바르게 나타낸 것은?



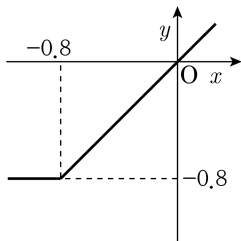
①



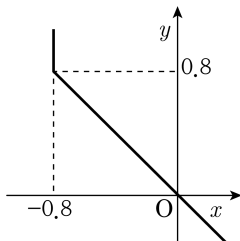
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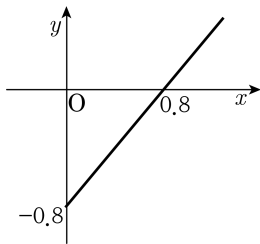
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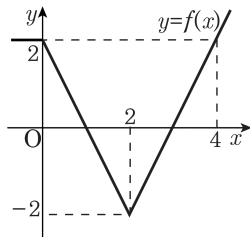
④



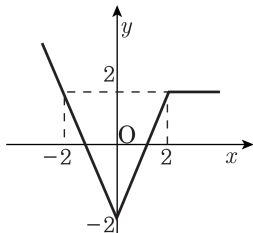
⑤



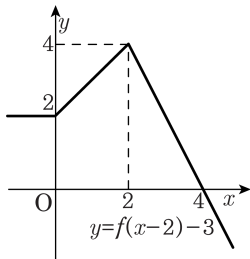
5. 방정식 $y = f(x)$ 가 나타내는 도형이 그림과 같을 때, $y = f(2-x)$ 가 나타내는 도형을 좌표평면 위에 바르게 나타낸 것은?



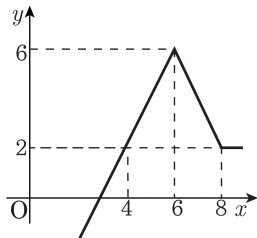
①



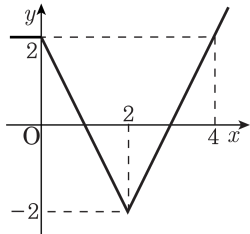
②



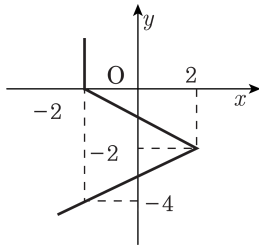
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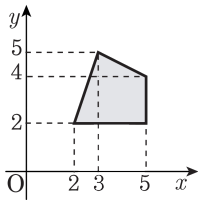
④



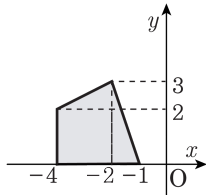
⑤



6. 그림 (가)의 도형은 평행이동 및 대칭이동에 의해 그림 (나)로 이동한다. 그림 (가)의 도형의 방정식이 $f(x, y) = 0$ 일 때, 그림 (나)의 도형의 방정식은?



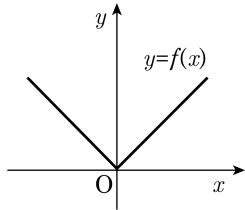
(가)



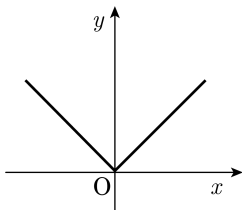
(나)

- | | |
|--------------------------|--------------------------|
| ① $f(x + 1, y + 2) = 0$ | ② $f(x + 1, y - 2) = 0$ |
| ③ $f(-x - 1, y - 2) = 0$ | ④ $f(-x + 1, y - 2) = 0$ |
| ⑤ $f(-x + 1, y + 2) = 0$ | |

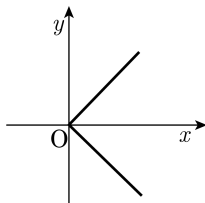
7. 함수 $y = f(x)$ 의 그래프가 다음 그림과 같을 때, 다음 중 $y = -f(-x)$ 의 그래프의 개형으로 옳은 것은?



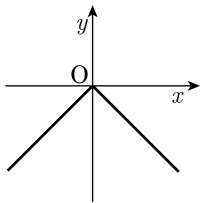
①



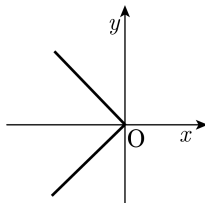
②



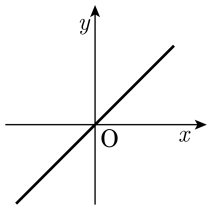
③



④



⑤



8. 다음은 갑, 을, 병, 정 네 사람이 도형의 이동에 대하여 말한 것이다.
올바르게 말한 사람은?

갑: 점 (x, y) 를 점 $(x-a, y-b)$ 로 옮기는 평행이동에 의하여
 $f(x, y) = 0$ 이 나타내는 도형은 $f(x+a, y+b) = 0$ 이
나타내는 도형으로 이동 한다.

을: 점 (x, y) 를 점 $(x-2, y+1)$ 로 옮기는 평행이동에 의하여
점 $(2, -1)$ 은 점 $(0, 0)$ 으로 이동한다.

병: 점 (x, y) 를 점 $(-x, -y)$ 로 옮기는 대칭이동에 의하여 $y =$
 $f(x)$ 이 나타내는 도형은 $y = -f(-x)$ 이 나타내는 도형으
로 이동한다.

정: 점 (x, y) 를 점 (y, x) 로 옮기는 대칭이동에 의하여 $f(x, y) =$
 0 이 나타내는 도형은 $f(y, x) = 0$ 이 나타내는 도형으로
이동한다.

① 갑, 을, 병

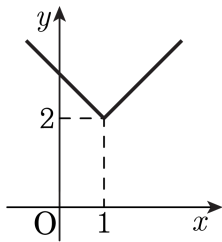
② 갑, 을, 정

③ 갑, 병, 정

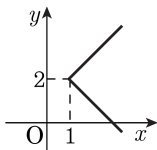
④ 을, 병, 정

⑤ 갑, 을, 병, 정

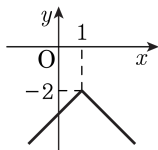
9. 방정식 $f(x, y) = 0$ 이 나타내는 도형이 아래 그림과 같을 때, 다음 중 방정식 $f(y, x) = 0$ 이 나타내는 도형은?



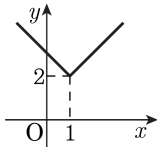
①



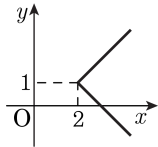
②



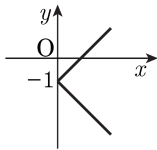
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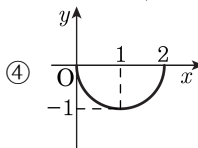
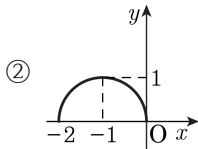
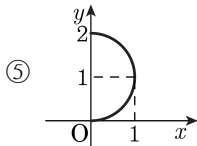
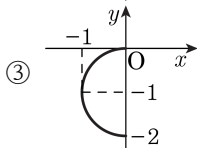
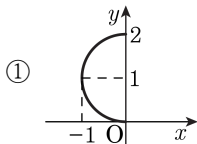
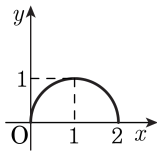
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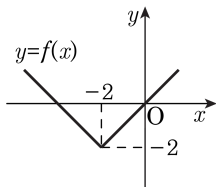
⑤



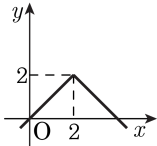
10. 도형 $f(x, y) = 0$ 의 그래프가 아래 그림과 같을 때,
 도형 $f(-y, -x) = 0$ 의 그래프로 옳은 것은?



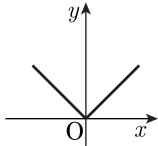
11. 다음 그림은 함수의 그래프이다. 다음 중 $y = f(-x) + 2$ 의 그래프를 나타낸 것은?



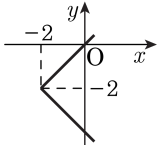
①



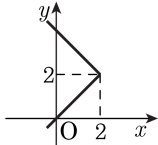
②



③



④



⑤

