



1

The slope of the line that goes through $(-1, -4)$ and (a, b) is less than 0. Which of the following can be (a, b) ?

- A) $(-1, -5)$
- B) $(1, -5)$
- C) $(2, 5)$
- D) $(3, 0)$

2

Consider the vertical line that goes through $(3, 4)$. Which of the points below lie on this vertical line?

- A) $(3, 2)$
- B) $(2, 4)$
- C) $(3, 0)$
- D) $(0, 3)$

3

Suppose the point (a, b) satisfies $a \cdot b = 1$. Then what quadrants can (a, b) be in?

- A) *I* only
- B) *I, III* only
- C) *I, II, IV* only
- D) Any quadrant

4

Which of the following functions lie in only the first two quadrants?

- A) $f(x) = 3x - 1$
- B) $f(x) = 2x$
- C) $f(x) = -2x$
- D) $f(x) = x^2 + 1$



5

Which of the following functions goes through the origin?

- A) $f(x) = 3x - 1$
- B) $f(x) = |x + 1| - 1$
- C) $f(x) = \frac{1}{x}$
- D) $f(x) = x^2 + 2x + 1$

6

At how many points do the graphs described by $2x - y = 7$ and $3x - y = 1$ intersect?

- A) 0
- B) 1
- C) 2
- D) 3

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At how many points do the graphs described by $2x - y = 7$ and $4x - 2y = 3$ intersect?

- A) 0
- B) 1
- C) 3
- D) Infinitely many

8

At how many points do the graphs described by $2x - y = 2$ and $6x - 3y = 6$ intersect?

- A) 0
- B) 1
- C) 3
- D) Infinitely many



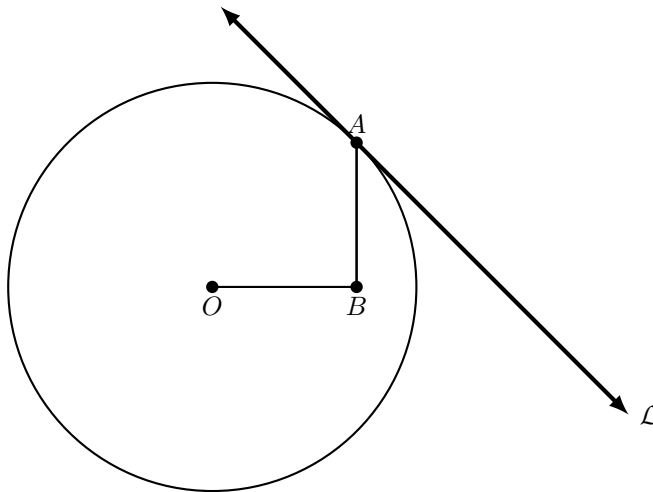
9

Which of the following (x, y) pairs is a solution to the equation $xy + y = 1$?

- A) $(1, -1)$
- B) $(-1, 1)$
- C) $(2, 2)$
- D) None of the above

10

For a circle centered at O , line \mathcal{L} is tangent to this circle at A and has a slope of $-\frac{1}{2}$. If the length of \overline{OB} is 2 and $\overline{OB} \perp \overline{AB}$, then what is the radius of the circle?



- A) 2
- B) $3\sqrt{2}$
- C) $2\sqrt{5}$
- D) 6

Answer Key

Calculator Off	
1	B
2	B
3	B
4	D

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Calculator On	
5	B
6	B
7	A
8	D
9	D
10	C