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) $f(x) = x^2 + 1$

CONTINUE

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

7

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) $(1, -1)$

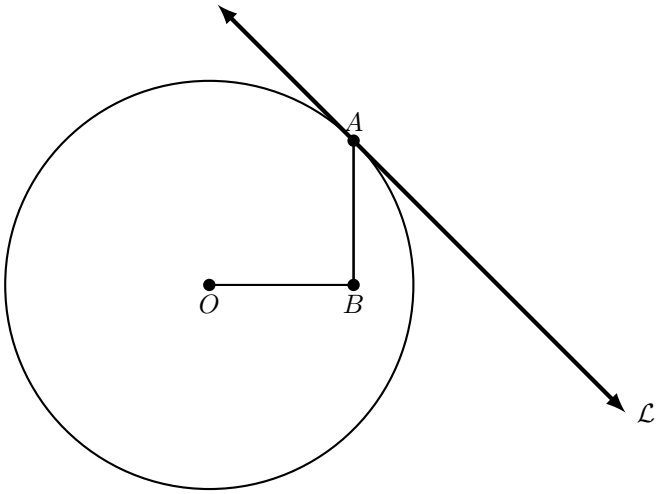
B) $(-1, 1)$

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 $\overline{OB} \perp \overline{A}B$, 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

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