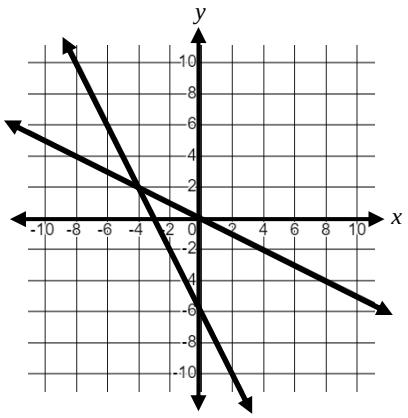
Name _____ Date _____

Algebra 2 Readiness Progress Screener

Questions 1-3: Solve systems of equations.

1. $y = -\frac{1}{2}x$ *and* $y = -2x - 6$



Find the x-coordinate of the solution: -4

2. $-1x + y = 8$ *and* $y = 3x$

Find the y-coordinate of the solution: 12

3. $-x + 3y = 10$ *and* $x + 4y = 11$

Find the x-coordinate of the solution: -1

Number Correct = _____

Algebra 2 Readiness Progress Screener

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Questions 4-6: Factor quadratic expressions and reveal the zeros of a function.

4. The area model below represents the expression $x^2 + 7x + 10$.

What are the two factors of the expression?

$+x^2$	$+x$	$+x$	$+x$	$+x$	$+x$
$+x$	+1	+1	+1	+1	+1
$+x$	+1	+1	+1	+1	+1

Factors: $x + 5$ and $x + 2$

5. Factor the expression.

$$x^2 + 4x - 12$$

Factors: $x + 6$ and $x - 2$

6. Find the zeros of the function.

$$f(x) = x^2 + 10x + 16$$

Zeros: -8 and -2

Number Correct = _____

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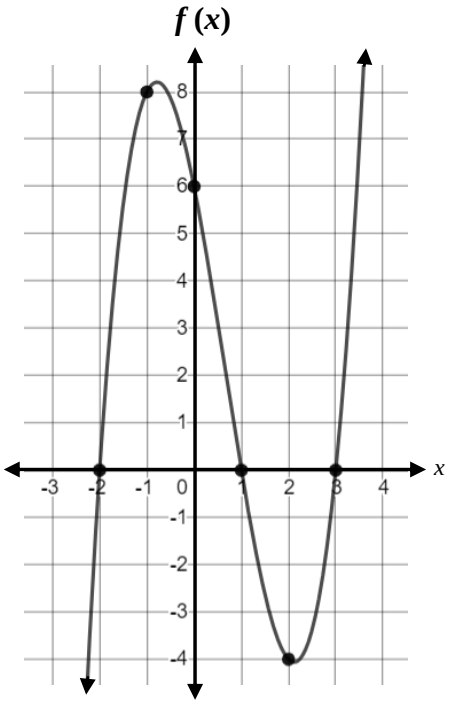
Questions 7-9: Evaluate the function.

7. Use the graph to find the value of $f(2)$.



Circle your answer:

-4	-3	-2	-1	-0.6	0	0.6	
1	2	3	4	5	6	7	8

8. For the function $g(x) = x + 6$,
find the value of $g(-4)$.

Answer: 2

9. For the function $h(x) = x^2 + 5$,
find the value of $h(3)$.

Answer: 14

Number Correct = _____

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Questions 10-12: Determine if a function is linear or non-linear.

10. Given the function of $f(x)$ provided in the table, circle the answer choice that makes the statement true.

x	0	1	2	3	5
$f(x)$	-4	-1	2	5	8

"The function represented in the table is _____."

- non-linear because the values of x and $f(x)$ always change at a constant rate
- **non-linear because the values of x and $f(x)$ do not always change at a constant rate**
- linear because the values of x and $f(x)$ always change at a constant rate
- linear because the values of x and $f(x)$ do not always change at a constant rate

11. Given the function of $g(x)$ provided in the table, circle the answer choice that makes the statement true.

x	0	1	2	3	5
$g(x)$	-4	-1	2	5	11

"The function represented in the table is _____."

- non-linear because the values of x and $g(x)$ always change at a constant rate
- non-linear because the values of x and $g(x)$ do not always change at a constant rate
- **linear because the values of x and $g(x)$ always change at a constant rate**
- linear because the values of x and $g(x)$ do not always change at a constant rate

12. Circle all of the linear functions.

$f(x) = x^2 + 5$ **$g(x) = 2x + 5$** $h(x) = 2^x + 5$ **$k(x) = x$**

Number Correct = _____

Algebra 2 Readiness Progress Screener

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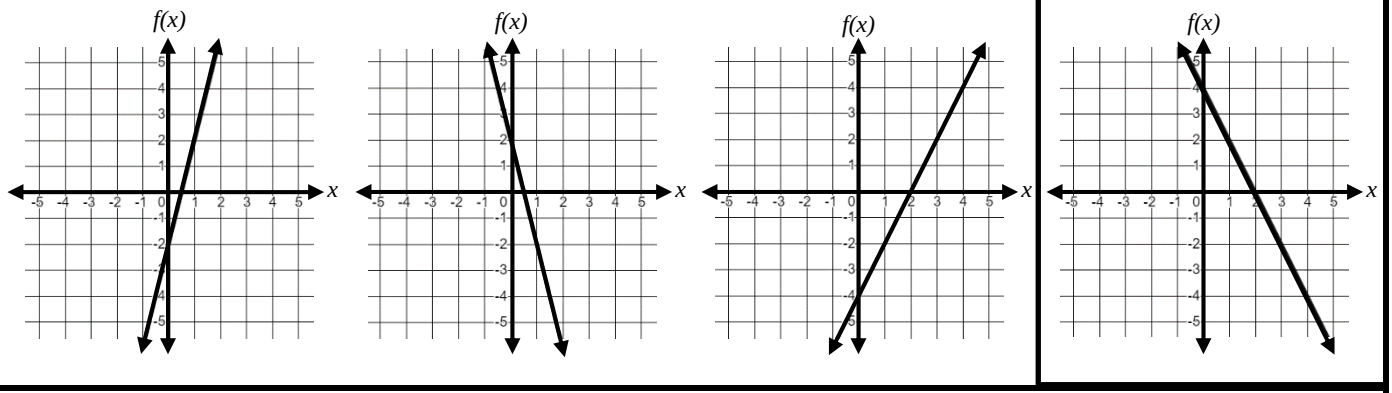
Questions 13-15: Identify graphs of linear and non-linear functions.

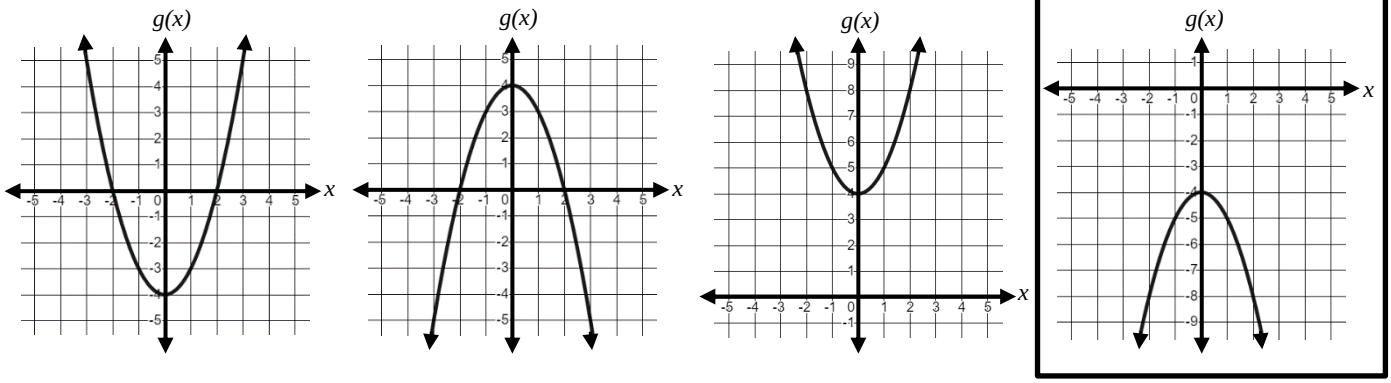
13. The function $f(x) = -2x + 4$ could be represented by which graph?

Circle your answer:



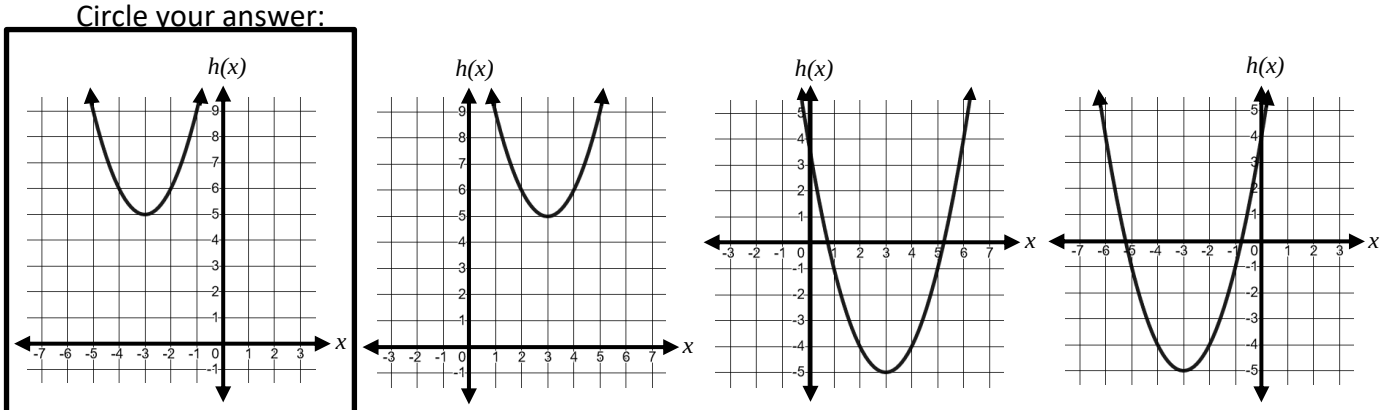
14. The function $g(x) = -x^2 - 4$ could be represented by which graph?

Circle your answer:



15. The function $h(x) = (x + 3)^2 + 5$ could be represented by which graph?

Circle your answer:



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