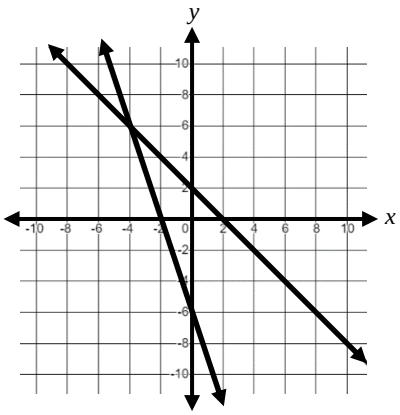
Name _____ Date _____

Algebra 2 Readiness - Summer Pre Screener

Questions 1-3: Solve systems of equations.

1. $y = -x + 2$ *and* $y = -3x - 6$



Find the y-coordinate of the solution: _____

2. $-1x + y = 6$ *and* $y = 4x$

Find the y-coordinate of the solution: _____

3. $-x + 3y = 5$ *and* $x + 2y = 5$

Find the x-coordinate of the solution: _____

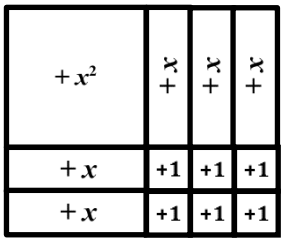
Number Correct = _____

Algebra 2 Readiness - Summer Pre

(Continued)

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

4. The area model below represents the expression $x^2 + 5x + 6$.
What are the two factors of the expression?



Factors: _____ and _____

5. Factor the expression.

$$x^2 + 2x - 8$$

Factors: _____ and _____

6. Find the zeros of the function.

$$f(x) = x^2 + 8x + 15$$

Zeros: _____ and _____

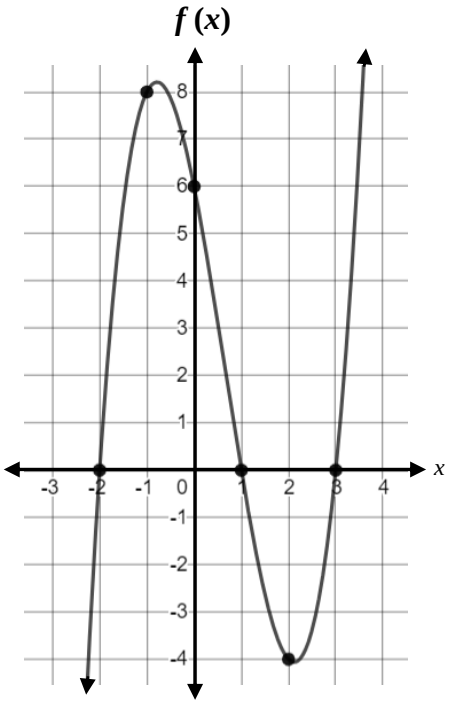
Number Correct = _____

Algebra 2 Readiness - Summer Pre

(Continued)

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 $g(x) = x + 5$,

find the value of $g(-2)$.

Answer: _____

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

find the value of $h(4)$.

Answer: _____

Number Correct = _____

Algebra 2 Readiness - Summer Pre

(Continued)

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
$f(x)$	-2	1	4	7	13

"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
$g(x)$	-2	1	4	7	10

"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 non-linear functions.

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

Number Correct = _____

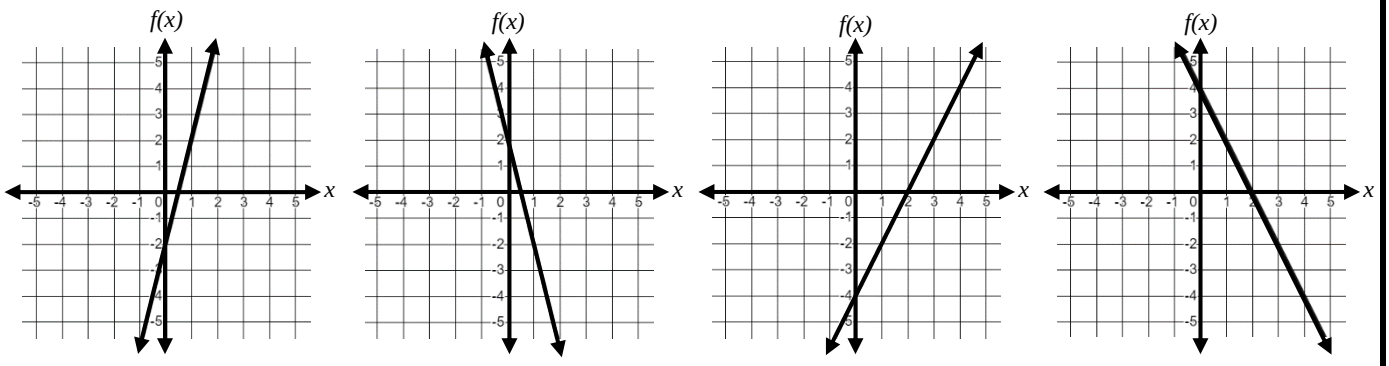
Algebra 2 Readiness - Summer Pre

(Continued)

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

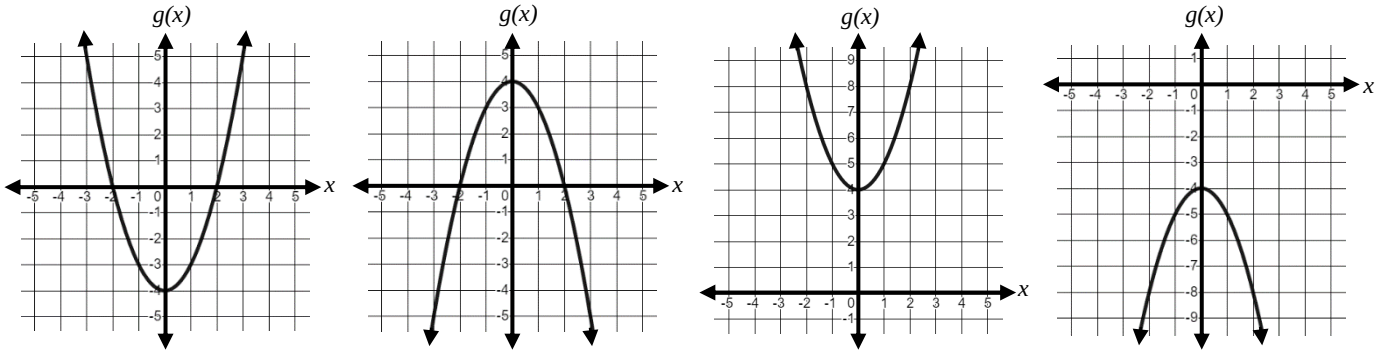
13. The function $f(x) = -4x + 2$ could be represented by which graph?

Circle your answer:



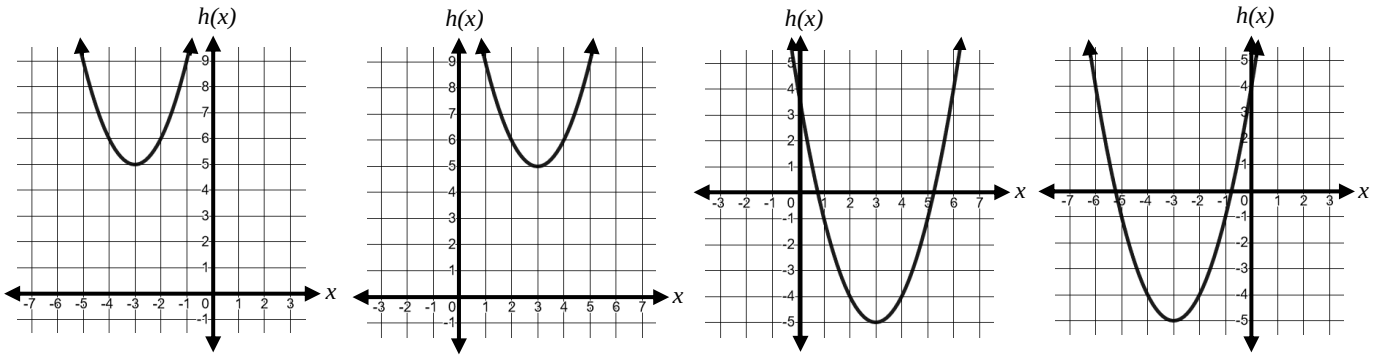
14. The function $g(x) = -x^2 - 4$ could be represented by which graph?

Circle your answer:



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

Circle your answer:



Number Correct = _____