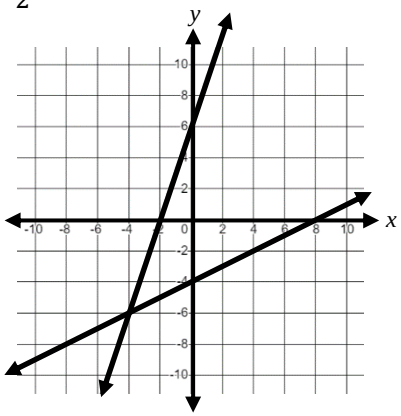
Name _____ Date _____

Algebra 2 Readiness Screener - Fall

Questions 1-3: Solve systems of equations.

1. $y = \frac{1}{2}x - 4$ *and* $y = 3x + 6$



Find the x-coordinate of the solution: _____

2. $4x + y = 14$ *and* $y = 3x$

Find the y-coordinate of the solution: _____

3. $2x - y = 5$ *and* $3x + y = 10$

Find the x-coordinate of the solution: _____

Number Correct = _____

Algebra 2 Readiness Screener - Fall

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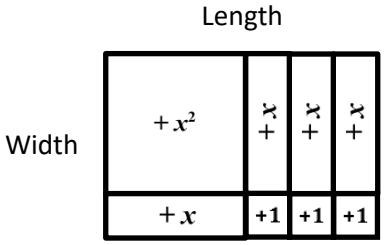
Questions 4-6: Factor quadratic expressions to reveal the zeros of a function.

4. The area model below represents the expression $x^2 + 4x + 3$.
What are the two factors of the expression?



Factors: _____ and _____

5. Factor the expression.

$$x^2 + x - 6$$

Factors: _____ and _____

6. Find the zeros of the function.

$$f(x) = x^2 + 7x + 12$$

Zeros: _____ and _____

Number Correct = _____

Algebra 2 Readiness Screener - Fall

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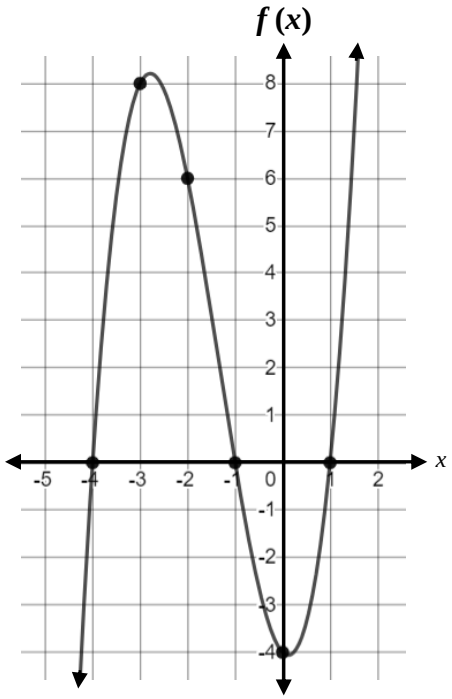
Questions 7-9: Evaluate the function.

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 $g(x) = x + 3$,

find the value of $g(-1)$.

Answer: _____

9. For the function $h(x) = x^2 + 4$,

find the value of $h(5)$.

Answer: _____

Number Correct = _____

Algebra 2 Readiness Screener - Fall

(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
$f(x)$	-1	1	3	5	7

"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
$g(x)$	-1	1	3	5	9

"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.

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

Number Correct = _____

Algebra 2 Readiness Screener - Fall

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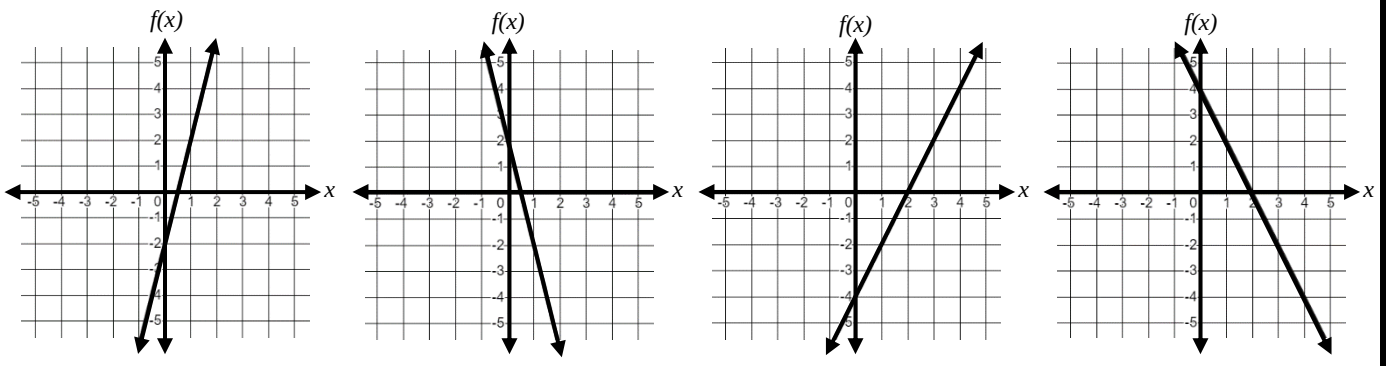
Questions 13-15: Identify graphs of linear and non-linear functions.

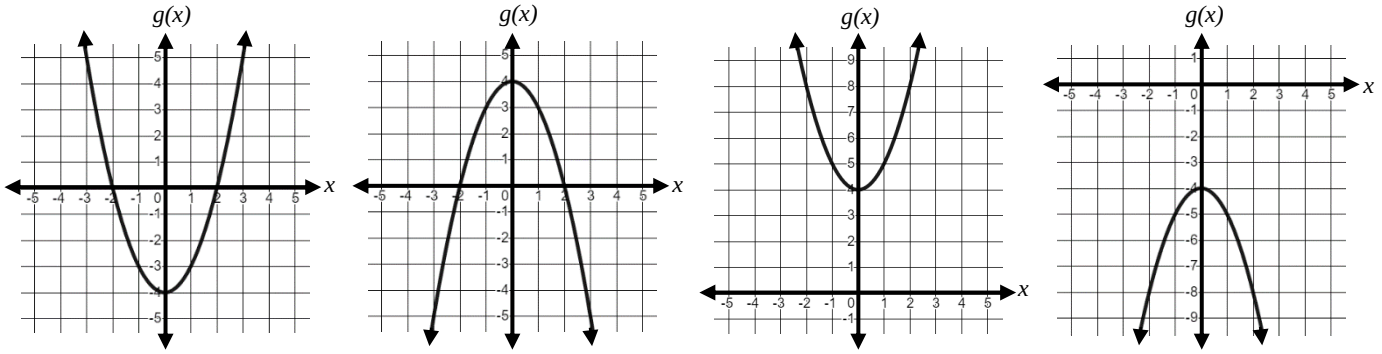
13. The function $f(x) = 2x - 4$ could be represented by which graph?

Circle your answer:



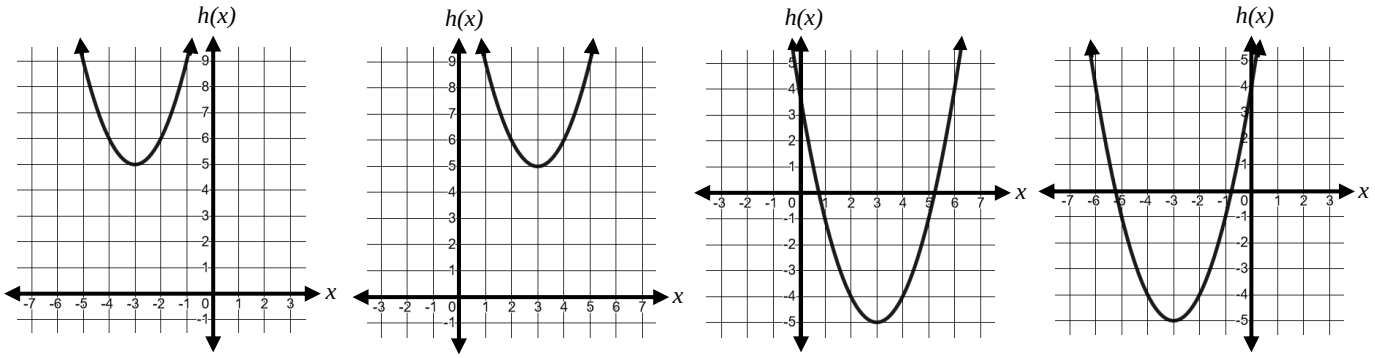
14. The function $g(x) = x^2 - 4$ could be represented by which graph?

Circle your answer:



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

Circle your answer:



Number Correct = _____