Name _____ Date _____

Algebra 2 Readiness Progress Screener

Questions 1-3: Solve systems of equations.

1. $y = -\dfrac{1}{2}x$ $\quad$ *and* $\quad y = -2x - 6$
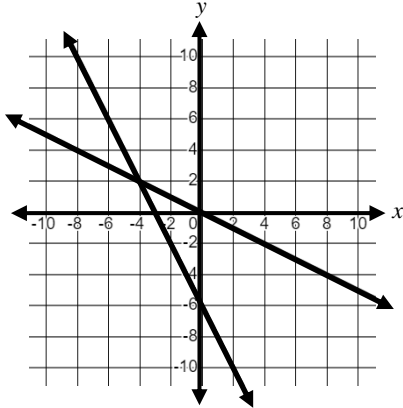
Find the *x*-coordinate of the solution: -4

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

Find the *y*-coordinate of the solution: 12

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

Find the *x*-coordinate of the solution: -1

Number Correct = _____

DELTA MATH

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?

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.

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

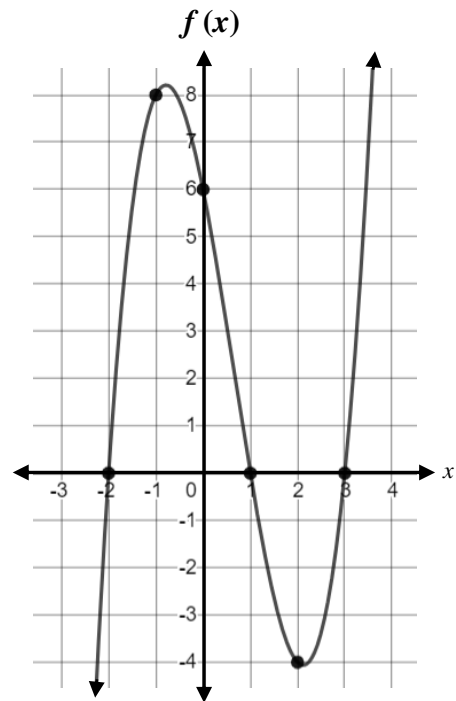Zeros: -8 and -2

Number Correct = _____

Algebra 2 Readiness Progress Screener

(Continued)

Questions 7-9: Evaluate the function.

---

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

$f(x)$

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 = _____

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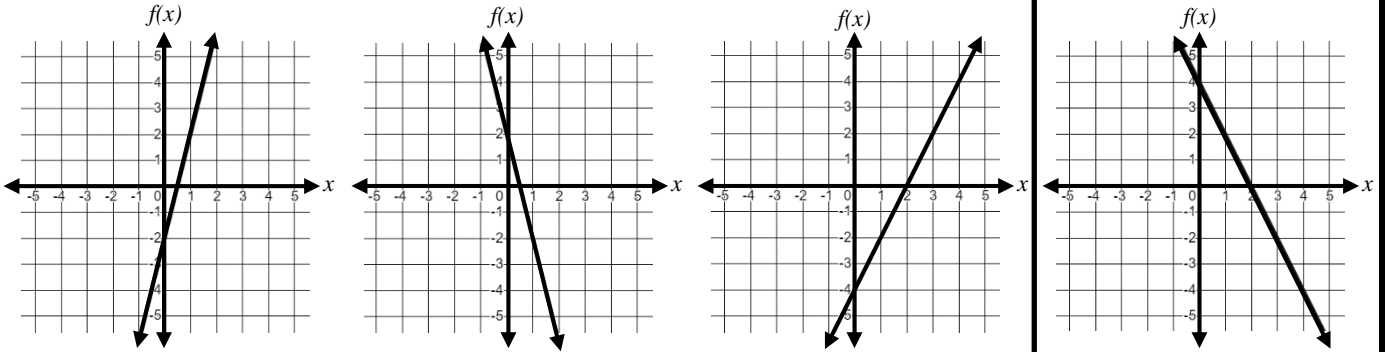
$$f(x) = x^2 + 5 \qquad g(x) = 2x + 5 \qquad h(x) = 2^x + 5 \qquad k(x) = x$$

Questions 13-15: Identify graphs of linear and non-linear functions.
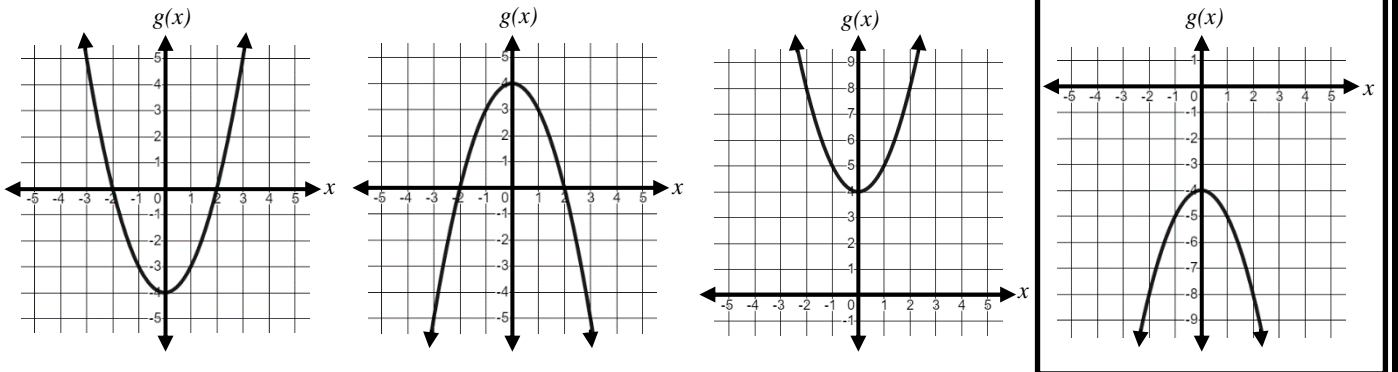
13. The function $f(x) = -2x + 4$ could be represented by which graph?

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 = _____