NAME_____**DATE**_____**PER.**_____

SOLVING QUADRATIC EQUATIONS IN THE CALCULATOR

Answer the following. Round answers to the nearest tenth, if necessary.

1. Find the values of x that satisfy the equation $x^2 + 8x + 12 = 0$.	2. What are the zeros of $g(x) = -3x^2 – 6x + 2$?
3. Find the x-intercepts of $f(x) = 4x^2 + 8x – 5$.	4. What are the solutions to $-3x^2 + 11x = -4$?
5. What are the zeros of the function $f(x) = 3x – 9$?	6. Find the solutions to $2x^2 = 7x + 6$.

Answer the following, using a calculator as needed.

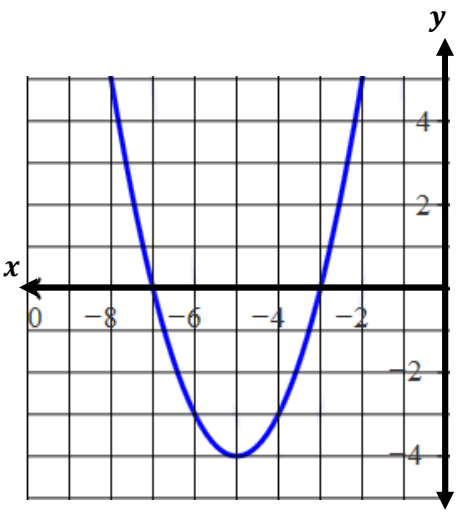
7. A, B, and C are graphs of quadratic functions. Complete each of the following statements.

Graph _____ has one real solution at _____ and a min / max vertex at _____.

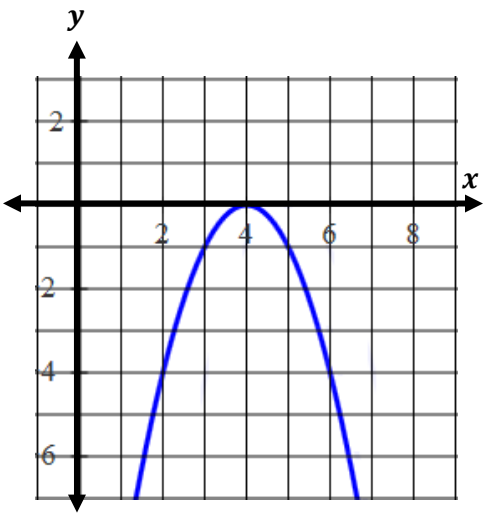
Graph _____ has two real solutions at _____ and _____ and a min / max vertex at _____.

Graph _____ has no real solutions and a min / max vertex at _____.

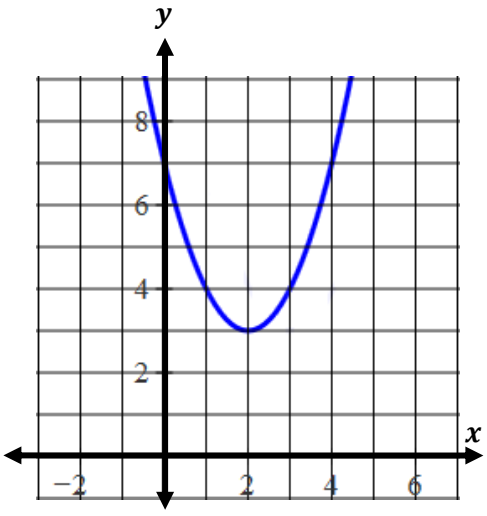
A.



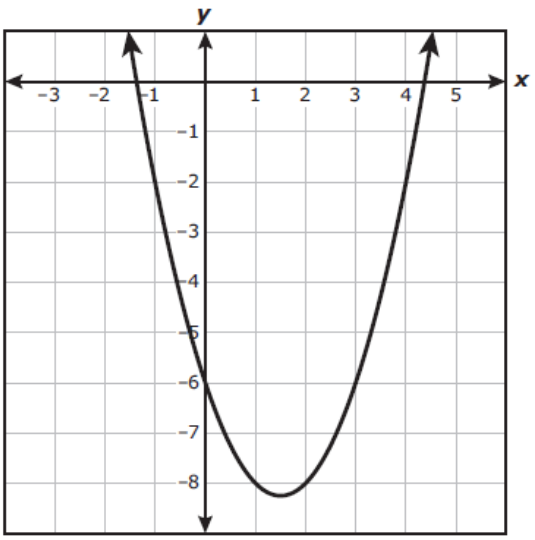
B.



C.



_____ 8. The graph of quadratic function *g* is shown below.



Based on the graph, between which two values of *x* is a zero of *g* located?

A. –9 and –8

B. 1 and 2

C. –7 and –5

D. 4 and 5

_____ 9. Which statement about the quadratic function below is false?

$$f(x) = x^2 - \frac{31}{4}x - 2$$

A. f(x) has a minimum value.

B. f(x) = 0 has solutions 0 and 8.

C. f(x) has roots at $-\frac{1}{4}$ and 8.

D. f(x) has a zero located between -1 and 0.

Review. Show all work.

10. Write $x^2 + 8x + 12$ in factored form.

11. Write $4x^2 + 8x – 5$ in factored form.

12. If (x, -3) is a solution to the equation 3x – 2y – 15 = 0, what is the value of x?

Extension: What do you notice about the question and answers for #1 & 10 and #3 and 11?

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