1. Find and label the vertex and the line of symmetry.



The vertex is \_\_\_\_\_\_\_ (type an ordered pair)

The equation of the line of symmetry is x= \_\_\_\_\_\_\_\_\_

1. Write a quadratic equation having the given number as solutions.

-4 and -1

The quadratic equation is 0= \_\_\_\_\_\_\_\_\_\_\_

1. Give exact and approximate solutions to three decimal places.



What are the exact solutions? X= \_\_\_\_\_\_\_\_\_\_\_

Type an exact answer, using radicals as needed. Rationalize all denominators. Express complex numbers in term of i. Use a comma to separate answers as needed. There are no approximate solutions since the solutions are integers.

6.

a) Solve.



Type an exact answer, using radicals as needed. Rationalize all denominators. Express complex numbers in term of i. Use a comma to separate answers as needed. There are no approximate solutions since the solutions are integers.

b) Find the x-intercepts of



Type an order pair. Simplify your answer. Type an exact answer, using radicals as needed. Express complex numbers in terms of i. Use a comma to separate answers as needed.

7. The number of tickets sold each day for an upcoming performance of Handel’s Messiah is given by, where x is the number of days since the concert was first announced. When will daily ticket sales peak and how many tickets will be sold that day?

8. Find the vertex, the line of symmetry, and the maximum or minimum value of f(x).



The vertex is \_\_\_\_\_\_\_\_\_\_\_\_

The line of symmetry is x= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The maximum/minimum value of f(x) is?

Is the value, f(-5)=-9, maximum/minimum?

9. Find the vertex, the line of symmetry, the maximum or minimum value of the quadratic function, and graph the function.



What is the vertex?

What is the equation of the line of symmetry?

What is the maximum/minimum of f(x)?

Is the value, f(3)=-8 a minimum or a maximum?

10. Find the vertex, the line of symmetry, the maximum or minimum value of the quadratic function, and graph the function.



The vertex is \_\_\_\_\_\_\_\_\_\_\_\_

The equation of the line of symmetry is x=\_\_\_\_\_\_\_\_\_\_\_\_\_

The maximum/minimum of f(x) is \_\_\_\_\_\_\_\_\_\_\_\_\_\_

The value f(2)=8 is a minimum/maximum.

12. A student opens a mathematics book to two facing pages. The product of the page numbers is 342. Find the page numbers.

13. Find the vertex, the line of symmetry, and the maximum or minimum value of f(x).



The vertex is \_\_\_\_\_\_\_\_\_

The line of symmetry is x= \_\_\_\_\_\_\_\_\_\_\_\_\_

The maximum/minimum value of f(x) is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is the value, f(-6)=1, a minimum or a maximum?

14. Solve by completing the square.



15. Give exact and approximate solutions to three decimal places.



16. Find the vertex.



17. Find the vertex, the line of symmetry, the maximum or minimum value of the quadratic function, and graph the function.

The vertex is \_\_\_\_\_\_\_\_\_\_

The maximum/minimum of f(x) is \_\_\_\_\_\_\_\_\_\_

Is the value, f(1)=3 a minimum or a maximum?

18. Give exact and approximate solutions to the three decimal places.



19.

a) Solve 

b) Find the x=intercepts of 

20. Find the x-intercepts and y-intercepts.



21. The width of a rectangle is 1 ft less than the length. The area is 6 ft. Find the length and the width.

22. Solve for x.

