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

F(x)=(x+1)^2

Vertex =

Line of symmetry is x=

3. The length of a rectangle is twice the width. The area is 648 yd^2. Find the length and the width.

Length =

Width =

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

F(x)=1/4x^2

Vertex =

Line of symmetry =

5. Write a quadratic equation in the variable x having the given numbers as solutions. Type the equation in standard form, ax^2+bx+c=0

The Solutions are -4,0

The equation is (?) = 0

6. Find the vertex, the line of symmetry, the maximum or minimum value of the quadratic function.

F(x)=x^2-4x-2

Vertex=

Line of symmetry =

Maximum/minimum=

Is the value f(2)=-6 a minimum or maximum?

7. Determine the nature of the solutions of the equation.

Y^2=4/7y + 2/5

1. The equation has two real solutions.
2. The equation has one real solution.
3. The equation has two non-real solutions.

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

F(x)=1/2(x+1)^2+9\

Vertex =

Line of symmetry is x =

What is the maximum/minimum value of f(x) =

Is the value, f(-1)=9 a minimum or maximum? =

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

F(x)=3x^2-24x+51

Vertex =

Line of symmetry is x =

What is the maximum/minimum value of f(x) =

Is the value, f(4)=3 a minimum or maximum? =

10. Find the x-intercepts and y-intercepts for f(x)

F(x) –x^2-7x+3

X=

Y=

11. Give exact and approximate solution to three decimal places.

Y^2-8y+16=25

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

F(x) = -(x+6)^2 – 3

Vertex =

Line of symmetry is x =

What is the maximum/minimum value of f(x) =

Is the value, f(-6)=-3 a minimum or maximum? =

13. Give exact and approximate solution to three decimal places.

X^2+3x-5=0

Exact solutions are =

Approximate solutions to 3 decimal places =

14. Solve for x

X^2+18x+4=0

15. Solve the formula for the given letter. Assume all variables represent non-negative numbers.

E=ic^2, for c.

16. Solve

a)3x^2-7x-13=0 What are the solutions?

b) f(x)=3x^2-7x-13 What are the x-intercepts?

17. Solve

a) 4x^2=28 What are the solutions?

b) find the x intercepts of f(x)=4x^2-28 What are the x-intercepts?

18. Determine the nature of the solutions of the equation.

X^2 + 10 =0

1. 2 real solutions?
2. 1 real solution
3. 2 imaginary solutions

19. Find the vertex, the line of symmetry, the maximum or minimum value of the quadratic function.

F(x) = 2x^2 – 12x + 23

Vertex =

Line of symmetry is x =

What is the maximum/minimum value of f(x) =

Is the value, f(4)=3 a minimum or maximum? =

20. A farmer decides to enclose a rectangular garden, using the side of a barn as one side of the rectangle. What is the maximum area that the farmer can enclose with 80 ft of fence? What should the dimensions of the garden be to give this area?

Maximum area = ? sq ft

Dimensions of the garden to give this area is 40 fd by ? ft.

21. Give exact and approximate solution to three decimal places.

(x-3)^2 = 20

Exact solutions are =

Approximate solutions to 3 decimal places =

22. Solve by completing the square.

X^2 + 6x – 7 =0

23. a Student opens a mathematics book to two facing pages. The product of the page numbers is 506. Find the page numbers.

The first page is =

The second page is =