1.) Solve the quadratic: .

2.) Solve the quadratic: 

3.) Solve the quadratic: 

4.) Solve using the quadratic formula: 

5.) Solve using the quadratic formula:

6.) Find the value that completes the square: .

7.) Solve by completing the square:

8.) Find the discriminant of: .

9.) Find the number and type of solutions of: .

10.) Which direction does the graph of:  open?

11.) Find the axis of symmetry of: .

12.) Find the vertex of: .

13.) If given quadratic functions how do you determine which graph will be the narrowest?

14.) How do you determine if a quadratic will have a vertex that is a minimum or a maximum?

15.) Find the y-intercept of: .

16.) Find the vertex of the following quadratic equation:

17.) Find the x intercepts of the following quadratic equation:

18.) Simplify: 

19.) Simplify: 

20.) Multiply: 

21.) Multiply: 

22.) Divide: 

23.) Simplify: 

24.) Simplify: 

25.) Solve:  and state any restrictions

26.) Solve: , and state any restrictions

27.) Solve: 

28.) Solve: 

29.) Solve: 

30.) Solve:

31.) What is ‘k’ referred to as in the equation: *y = kx*

32.) What type of variation is represented by the following equation? y = 

33.) What type of variation is represented by the following equation? *y=kxz*

34.) What type of variation is represented by the following equation? 

35.) Find the constant of variation, k, if y varies directly as x and x = 3 and y = -6.

36.) Find the constant of variation, k, if y varies jointly as x and z and x = -3, y = 21

and z = -1.

37.) Find the constant of variation, k, if y varies inversely as x and y= -5 when x = 4.

38.) Multiply: (x + 3)(2x2 – 5x + 7)

39.) Multiply: (x - y2)(x + y2)

40.) Multiply: (9x + 2)(9x – 2)

41.) Multiply: (5x - 3)2

42.) Multiply: (8x + 1)(x - 4)

43.) Multiply: (2x + 5)(x2 - 6x − 3)

44.) Subtract: (4x3 – 17x2 + 2x + 7) – (x3 – 25x2 – 20)

45.) Add: (10xy – 6x2y + 3xy2 – 13) + (-5xy2 + 11x2y – 12xy + 21)

46.) Add: -5x + 6y – 11 + 8x – 3y – 2x + 16 - y

47.) Find the remainder when x3 – 7x2 + 15x – 9 is divided by x + 1?

48.) Divide: -4x3 + 5x2 + 6 by x – 1

49.) Divide: 3x4 - 51x2 + 7x +10 by x – 4

50.) Divide using synthetic division: 

51.) Make a list of all the possible rational zeros of the polynomial function:

f(x) = 3x3 + 5x2 – 6x + 2

52.) List the possible rational zeros of the function: f(x) = x3 – 2x – 16

53.) What are the factors of: x3 - x2 - 5x – 3?

54.)Factor the polynomial completely: x3 - 7x2 + 15x – 9

55.) Factor the polynomial completely. x3 – 2x2 – 48x

56.) Find the zeros of the polynomial function: f(x) = x3 + 8x2 + 5x - 14

57.) Find the zeros of the polynomial function: f(x) = x3 – 25x

58.) Find all real zeros of the function: f(x) = x4 + 3x3 – 6x2 – 8x

59) Describe the end behavior of the function: f(x) = x2 + 9x3 – 3x4 + 6

60) Describe the end behavior of the function: f(x) = 7x4 + 2x2 + 3x – 1