First Periodical Examination
MAPEH 7
SY

Instruction. Shade the letter of your answer on the answer sheet provided. Use dark pencil only

1) Which of the following is the standard form of quadratic equation?
A) Ax + By + C = 0
B) $ax^2 + bx + c = 0$, a is not equal to 0
C) $ax^2 + bx + c < 0$, a is not equal to 0
D) y = mx + b

2) Transform $f(x) = -3(x+2)^2 + 2$ into general form of the quadratic function. (Show your solution for 3 points)
A) $f(x) = -3x^2 - 12x - 10$
B) $f(x) = -3x^2 + 12x + 10$
C) $f(x) = -3x^2 + 12x - 10$
D) $f(x) = 3x^2 - 12x + 10$

3) A 3cm by 3cm square piece of cardboard was cut from a bigger square cardboard. The area of the remaining cardborad was 40cm2. If s represents the length of the bigger cardboard, which of the following expressions give the are of the remaining piece? (sketch the cardboard partition for 3 points)
A) $s^2 – 9$ C) $s^2 + 40$
B) $s^2 + 9$ D) s - 9

4) Which of the following equation represents a quadratic function?
A) $2y^2 + 3 = x$
B) y = 3x - 22
C) $y = 3 + 2x^2$
D) y = 2x - 3

5) If $2x^2 - px + 8 = 0$ has equal roots and p > 0, then the value of p is (Show your solution for 2 points)
A) 8 C) 1
B) 4 D) 2

6) It is a polynomial equation of degree two that can be written in the form $ax^2 + bx + c = 0$, where a, b, c are real numbers and a is not equal to 0.
A) quadratic equation
B) linear inequality
C) quadratic inequality
D) linear equation

7) The sum of the roots of $4x^2 + 8x - 3 = 0$ (Show your solution for 3 points)
A) -2 C) - 15/8
B) 12 D) - 8/5

8) Which of the following is the simplified form of the equation $3(x^2 + 7)$? (Show your solution for 3 points)
A) $-3x^2 + 10$
B) $3x^2 - 21$
C) $-3x^2 + 4$
D) $3x^2 + 21$

9) What is the absolute value of -3?
A) -3
B) -1/3
C) 1/3
D) 3

10) The length of the garden is 5 m longer than its width and the area is $14m^2$. How long is the garden? (Show your solution for 3 points)
A) 5m C) 7m
B) 9m D) 2m

11) Which of the following rational algebraic equations is transformable to a quadratic equation? (Show your solution for 3 points)
A) $\frac{7}{2}+\frac{5}{(s+2)}=\frac{7}{8s}$

B) $\frac{(w+1)}{2} - \frac{(w+2)}{4} = 7$

C) $\frac{1}{m} + \frac{5}{(m+1)} = 5m$

D) $\frac{(2t-1)}{5} + \frac{2}{3} = \frac{3t}{4}$

12) A perfect square trinomial is a trinomial in the form:
A) $a^2 + 2ab + b2$ C) $a^2 + ab + b2$
B) $a^2 + b2$ D) $a^3 - 2ab - b2$

13) What is the highest degree of a linear equation?
A) 1 C) 3
B) 0 D) 2

14) It is the highest or lowest point the parabola will reach.
A) symmetry C) vertex
B) all of the above D) axis

15) What is the highest degree of the linear function?
A) 1 C) 0
B) 2 D) 3

16) The quadratic function $y = -2x^2 + 4x - 3$
A) real and equal of zeros
B) real and unequal zeros
C) equal and not real
D) no real roots

17) Which of the following is the Quadratic Formula?
A) $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
B) $\frac{b \pm \sqrt{b^2 - 4ac}}{2a}$
C) $\frac{-b \pm \sqrt{b^2 + 4ac}}{2a}$
D) none of the above

18) What is the constant or the c term in the equation $x^2 + 5x + 7 = 0$?
A) 1
B) 7
C) 3
D) 2

19) Which of the following quadratic equation is in the standard form?
A) $7x + 12 = x^2$
B) $x^2 + 7x + 12 = 0$
C) $x^2 + 7x = -12$
D) $x^2 = -12 - 7x$

20) The discriminant of $x^2 + 4x + 3 = 0$ is
A) 12 C) 4
B) 13 D) 5

21) The product of the roots of the equation (m-1)/2 = 3/(m+2) is (Show your solution for 3 points)
A) 3 C) 4
B) -8 D) -1

22) What is the highest degree of the quadratic function?
A) 2 C) 1
B) 0 D) 3

23) Which of the following is a quadratic equation?
A) 3m - 7 = 12
B) $-5n^2 + 4n - 1$
C) $2x^2 - 7x >/= 3$
D) $t^2 + 5t - 14$

24) If $x^2 + mx + 7 = 0$ can be solved by factoring and $m > 0$, then m is (Show your solution for 3 points)
A) 8 C) 0
B) 2 D) 7

25) The quadratic function $f(x) = x^2 + 2x - 1$ is expressed in standard form as (Show your solution for 3 points)
A) $f(x) = (x+1)^2 - 1$
B) $f(x) = (x+1)^2 + 2$
C) $f(x) = (x+1)^2 - 2$
D) $f(x) = (x+1)^2 + 1$

26) If the equation $x^2 - 2x - 8 = 0$ has roots m and n, the equation whose roots are 1/m and 1/n is (Show your solution for 3 points)
A) $x^2 - 2x - 8 = 0$
B) $8x^2 + 2x - 1 = 0$
C) $8x^2 + x - 1 = 0$
D) none of the above

27) What is the nature of the following of the quadratic if the value of this discriminant is zero?
A) The roots are rational and not equal
B) The roots are not real
C) The roots are rational and equal
D) The roots are irrational and not equal

28) Which of the following Quadratic Equation has no real roots? (Show your solution for 3 points)
A) $2x^2 + 4x = 3$
B) $-2r^2 + r + 7 = 0$
C) $3s^2 - 2s = -5$
D) $t^2 - 8t - 4 = 0$

29) What are the roots of the quadratic equation $x^2 + x - 56 = 0$? (Show your solution for 3 points)
A) 8 and -7
B) -8 and 7
C) 3 and -2
D) 2 and -1

30) Which of the following is being used to indicate inequality
A) ~
B) =
C) <
D) none of the above

31) Which of the following values of x make the equation $x^2 + 7x - 18 = 0$? (Show your solution for 3 points)
I. -9 II. 2 III. 9
A) II and III
B) I and III
C) I and II
D) I, II, and III

32) one of the roots of $2x^2 - 13x + 20 = 0$ is 4. What is the other root?
A) 2/5
B) - 5/2
C) - 2/5
D) 5/2

33) Which of the following coordinates of points belong to the solution set of the inequality $y < 2x^2 + 5x - 1$? (Show your solution through tabular method for 5 points)
A) (-3, 2)
B) (-2, 9)
C) (3, 1)
D) (1, 6)

34) The axis of symmetry of the function $y = (x - 2)^2 + 3$ is (2 points prove your answer)
A) x = 2
B) x + 2 = 0
C) x = -2
D) x + 3 = 0

35) The length of a wall is 12 m more than its width. If the area of the wall is less than 50 m^2, which of the following could be its length? (Show your solution for 3 points)
A) 16m
B) 4m
C) 3m
D) 15m

36) In the equation $x^2 + 3x + 7 = 0$, which is the b term?
A) 1
B) 3
C) 7
D) 2

37) The quadratic equation whose solutions are 3 and -1/3 is (Show your solution for 3 points)
A) $3x^2 - 33x - 3 = 0$
B) $3x^2 + 8x - 3 = 0$
C) $3x^2 - 33x + 3 = 0$
D) $3x^2 - 8x - 3 = 0$

38) How many real roots does the quadratic equation $x^2 + 5x + 7 = 0$ have? (Show your solution for 3 points)
A) 3
B) 1
C) 0
D) 2

39) What is the sum of the roots of the quadratic equation $x^2 + 6x - 14 = 0$? (Show your solution for 2 points)
A) -7
B) -6
C) -3
D) 14

40) A quadratic inequality is an equation of the form
A) $ax + b < 0$
B) $x = b/a$
C) $ax^2 + bx + c \leq 0$ with a is not equal to 0 or with >, $\geq$ or <
D) $ax + b \leq 0$ with a is not equal to 0 or with </=, > or <

41) The coordinates of the vertex of $y = x^2 + 5$
A) (0, 5)
B) (1, -5)
C) (1, -5)
D) (0, -5)

42) The roots of a qudratic equatrion are -4 and -5. Which of the following quadratic equation has these roots? (Show your solution for 3 points)
A) $x^2 + 9x + 20 = 0$
B) $x^2 - x + 20 = 0$
C) $x^2 + x - 20 = 0$
D) $x^2 - 9x - 20 = 0$

43) The graph of $y = x^2 - 3$ is obtained by sliding the graph of $y = x^2$
A) 3 units downward
B) 3 units upward
C) 3 units to the left
D) 3 units to the right

44) In the equation $x^2 + 7x + 12 = 0$, which is the a term?
A) 12
B) 7
C) 0
D) 1

45) Which of the following quadratic equation can be solved easily by extracting square roots? (prove your answer for 3 points)
A) $3v^2 + 2v - 8 = 0$
B) $4t^2 - 9 = 0$
C) $2w^2 + 7w - 3 = 0$

D) x2 + 7x + 12 = 0

46) What are the two consecutive even numbers whose product is 80?
A) {2, 4}
B) {4, 6}
C) {6, 8}
D) {8, 10}

47) In the equation $ax^2 + bx + c = 0$, a is not equal to
A) 0
B) 1
C) 2
D) 3

48) The sum of the number and its square is 110, Find the number. (Show your solution for 3 points)
A) 10
B) 11
C) 12
D) 13

49) Which of the following is the formula for discriminant?
A) $b^2 - 4ac$
B) $–b^2 - 4ac$
C) $b^2 + 4ac$
D) $–b^2 + 4ac$

50) If the discriminant is greater than 0 and is a perfect square, What is nature of the roots?
A) real, rational and equal
B) real, irrational and not equal
C) not real
D) none of the above

~God Bless~

Answer Key

1)	B	Poi: 1.0
2)	A	Poi: 1.0
3)	A	Poi: 3.0
4)	C	Poi: 1.0
5)	A	Poi: 2.0
6)	A	Poi: 1.0
7)	A	Poi: 3.0
8)	D	Poi: 3.0
9)	D	Poi: 1.0
10)	D	Poi: 3.0
11)	C	Poi: 3.0
12)	A	Poi: 1.0
13)	A	Poi: 1.0
14)	C	Poi: 1.0
15)	A	Poi: 1.0
16)	D	Poi: 1.0
17)	A	Poi: 1.0
18)	B	Poi: 1.0
19)	B	Poi: 1.0
20)	C	Poi: 1.0
21)	B	Poi: 3.0
22)	A	Poi: 1.0
23)	D	Poi: 1.0
24)	A	Poi: 3.0
25)	C	Poi: 3.0
26)	B	Poi: 3.0
27)	C	Poi: 1.0
28)	C	Poi: 3.0
29)	B	Poi: 3.0
30)	C	Poi: 1.0
31)	C	Poi: 3.0
32)	D	Poi: 3.0
33)	C	Poi: 1.0
34)	A	Poi: 2.0
35)	C	Poi: 3.0
36)	B	Poi: 1.0
37)	D	Poi: 3.0
38)	C	Poi: 3.0
39)	B	Poi: 2.0
40)	C	Poi: 1.0
41)	A	Poi: 2.0
42)	A	Poi: 3.0
43)	A	Poi: 1.0
44)	D	Poi: 1.0
45)	B	Poi: 3.0
46)	D	Poi: 1.0
47)	A	Poi: 1.0
48)	A	Poi: 3.0
49)	A	Poi: 1.0
50)	A	Poi: 1.0