Quiz -2

Q1.   Which of the following real numbers is not an integer?

     1.   -1.1
     2.   -1
     3.   0
     4.   5

Q2.   Which of the following is the absolute value |-10| of the number -10 ?

     1.   10
     2.   -10
     3.   0
     4.   ∞

Q3.   How many real numbers are there between the integer 2 and 3?

     1.   Infinitely many
     2.   None
     3.   2
     4.   3

Q4.   Suppose I tell you that X and Y are real numbers which make the statement $X \geq Y$ true.
Which pair of the number cannot be the value of X and Y?

     1.   X=3   Y=1
     2.   X=10 Y=5
     3.   X=-1 Y=-2
     4.   X=-1 Y=0

Q5.   Suppose that l and m are two positive numbers with $l < m$, which of the following inequalities is False ?

     1. $-l > -m$
     2. $5l < 5m$
     3. $-3l < -3m$
     4. $m-7 > m-7$

Q6. Find the set of all p which shows the inequality minus 2p +5 ≤ 7

    1.   p≥-6
    2.   p=-1
    3.   p≤-1
    4.   p≥-1

Q7. Which of the following real numbers is not in the close interval [2,3]

    1.   1
    2.   2.1
    3.   2
    4.   3

Q8. Which of the following intervals represent the set of all solutions to -5 ≤ a +2 < 10

    1.   [-7,8)
    2.   [-7,8]
    3.   (7,8)
    4.   [-5,10)

Q9. Which of the following Real Number or in open Ray (2.1, ∞) ?

    1.   0
    2.   2
    3.   3.1
    4.   -2

Q10. Which of the following values of X search the equation -3X + 2 = -4

    1.   X = -2
    2.   X = 2
    3. $X = \dfrac{2}{3}$
    4.   All values of X such that X ≤ 2

Q11. Which of the following points is not a on the line with equation
a -2 = 2 (b -1)

1. (1,2)
2. (3,1)
3. (0,0)
4. (2,4)

Q12. Suppose that A = {1,2,3} and B = {2,4,6} which of the following formula
do not define a function f : A → B ?

1. f(a) = 2a $\quad$ for each a∈A
2. f(1) = 8 $\qquad$ f(2) = 4 $\qquad$ f(3) =6
3. f(1) = 2 $\qquad$ f(2) = 6 $\qquad$ f(3) =4
4. f(1) = 6 $\qquad$ f(2) = 4 $\qquad$ f(3) =2

Q13. Suppose that A contains population of the COVID-19 study. Suppose Y
= {+,-} and
Z =[L,M}

Suppose that T : A → Y is the function which gives T(a) = + if person tests
positive and T(a) = - if they test negative.

Suppose that D : A → Z is the function which gives D(a) = L does not
actually have Covid 19 and D(a) = M if the person actually has Covid 19.

Which of the following must be true of person a if we have a false positive.

1. T(a) = - $\quad$ and $\quad$ D(a) = L
2. T(a) = - $\quad$ and $\quad$ D(a) = M
3. T(a) = + $\quad$ and $\quad$ D(a) = M
4. T(a) = + $\quad$ and $\quad$ D(a) = L

Q14. Suppose that f(x) = -3x+4 . Which of the following statement is true?

     1.   All statements are correct
     2.   f is neither a strictly increasing function nor a strictly decreasing function.
     3.   f is a strictly increasing function.
     4.   f is a strictly decreasing function.

Q15. Suppose that we have two sets X = {x,y} , Y = {a,b}. How many different functions
F : X → Y

     1.   1
     2.   0
     3.   Infinitely many
     4.   4