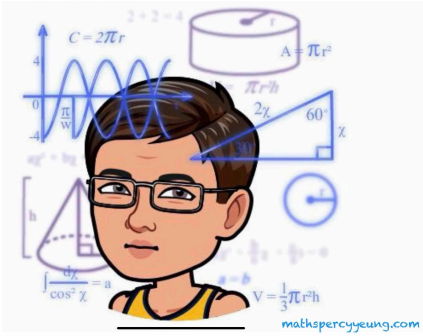
2018-19
MATH
S.3
Uniform
Test 2



2018 – 2019

S.3 Mathematics Uniform Test 2

Linear Inequalities in One Unknown

Question-Answer Book

Date: 10 – 10 – 2018
Time: 40 minutes
This paper must be answered in English

Instructions :

1. Write your name, class and class number in the spaces provided on this cover.
2. Answer ALL questions in this paper. Write your answers in the spaces provided in this Question-Answer Book.
3. Write your answers with black or blue ball-pens, and draw graphs or figures with HB pencils.
4. Unless otherwise specified, all working must be clearly shown.
5. Unless otherwise specified, numerical answers should be either exact or correct to 3 significant figures.
6. The diagrams in this paper are not necessarily drawn to scale.

Section A :
Multiple Choices Questions

Question	Full marks	Score
1-7	**14**	

Section B :
Conventional Questions

Question	Full marks	Score
8	3	
9	14	
10	4	
11	4	
Total	**25**	
Bonus 12	4	

Paper Total	**39**	

Section A : Multiple Choices Questions (14 marks)

Choose the *best* answer for each question and fill in the boxes.

1	2	3	4	5	6	7

1. Which of the following inequalities represents the statement 'half of x is less than 9'?

   A. $\frac{x}{2} \geq 9$

   B. $\frac{x}{2} \leq 9$

   C. $\frac{x}{2} > 9$

   D. $\frac{x}{2} < 9$

2. Which of the following is **not** a solution to the inequality $3-5x \leq -2$?

   A. $x=3$

   B. $x=2$

   C. $x=1$

   D. $x=0$

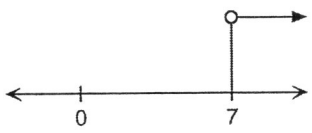
3. Set up an inequality in x for the following diagram.

   A. $x>7$

   B. $x<7$

   C. $x \geq 7$

   D. $x \leq 7$



4. Solve the inequality $12-5x \geq 4-x$.

   A. $x \leq -2$

   B. $x \geq -2$

   C. $x \leq 2$

   D. $x \geq 2$

5. Solve the inequality $\frac{3x-1}{8} \leq \frac{x+4}{7}$.

   A. $x \leq 3$

   B. $x \geq 3$

   C. $x \leq \frac{25}{3}$

   D. $x \geq \frac{25}{3}$

6. 3 times k is not greater than 27. Find the largest possible value of k.

   A. 10

   B. 9

   C. 8

   D. 7

7. The sum of two consecutive odd integers is greater than or equal to 16. Find the smallest possible value of the smaller integer.

   A. 5

   B. 7

   C. 9

   D. 11

Section B: Convention Questions (25 marks)

8. Given $a > b > 0$, determine whether each of the following statement is correct. Fill in " T " for the true statement and " F " for the false case. (3 marks)

(a) $-a < -b$ _____

(b) $a^2 < b^2$ _____

(c) $-\frac{1}{a} < -\frac{1}{b}$ _____

9. Solve the following inequalities and represent the solutions graphically. (14 marks)

(a) $3(x-2) \geq 7x$

(b) $\frac{x}{6}+1 > \frac{5}{6}-x$

(c) $7 < 6-\frac{x+2}{3}$

(d) $\frac{3-4x}{3} \leq \frac{1-x}{2}-2$

10. (a) Solve the inequality $2(3-x) \geq 4(7+x)$ and represent the solutions graphically.
(b) Write down the greatest possible integer that satisfies the inequality in (a). (4 marks)

11. Mr. Ho has \$320 and he wants to buy 6 movie tickets and some can of soft drink. If the prices of a movie ticket and a can of soft drink are \$45 and \$6 respectively, at most how many cans of soft drinks can he buy? (4 marks)

Bonus

12. A shopkeeper bought some oranges at \$4 each. 8 oranges were rotten before sales. The remaining oranges were all sold at \$4.5 each. If the shopkeeper does not suffer a loss, at least how many oranges did the shopkeeper buy? (4 marks)

– END OF PAPER –