ROLL NUMBER				

SET A

INDIAN SCHOOL MUSCAT

FIRST PERIODIC TEST

MATHEMATICS

CLASS: X | Sub. Code: 041 | Time Allotted: 50 mts.

18.04.2022 | Max. Marks: 20

GENERAL INSTRUCTIONS: Answer all Questions

section A: Each question carries 1 mark

Section B: Each question carries 2 marks

Section C: Each question carries 3 marks

SECTION - A

1. At what point will the line represented by $x - y = 8$ intersect y- axis 1

   (A) (0, 0) (B) (0, 8) (C) (8, 0) D (0, -8)

2. The pair of linear equations $3x + 4y + 5 = 0$ and $12x + 16y + 15 = 0$ *have* 1

   (A) Unique solution (B) many solutions (C) no solution (D) exactly two solutions

3. The pair of linear equations $kx + 2y = 5$ *and* $3x + y = 1$ *has unique solution if*: 1

   (A) k = 6 (B) $k \neq 6$ (C) k = 0 (D) k has any value

SECTION - B

4. Given the linear equation $3x - 4y - 7 = 0$, write another linear equation in these two variables such that the geometrical representation of the pair so formed is: 2
   (i) Intersecting lines, (ii) parallel lines
5. If sum of two positive numbers is 108 and the difference of these numbers is 8, then find the numbers 2
6. Solve by substitution: 2
   $x + y = 4$
   $3x - 2y = -3$

7. For what value of k, does the pair of equations below has a unique solution? 2

$y - x = 6$

$3kx + 2y = 7$

SECTION - C

8. Draw the graph of the following pair of linear equations: 3

$x + y = 8$

$6x - 5y = 15$

Shade the region bounded by these lines and x = 0. Also, write the coordinates of the vertices of the triangle.

9. Solve for x and y: 3

$x + 4y = 27xy$

$x + 2y = 21xy$

10. The age of mother and daughter are in the ratio 9 : 4 five years ago, age of mother was 10years more than twice the age of her daughter. Find their present ages. 3

End of the Question Paper

ROLL NUMBER				

SET B

INDIAN SCHOOL MUSCAT

FIRST PERIODIC TEST

MATHEMATICS

CLASS: X | Sub. Code: 041 | Time Allotted: 50 mts.

18.04.2022 | Max. Marks: 20

GENERAL INSTRUCTIONS: Answer all Questions

Section A: Each question carries 1 mark

Section B: Each question carries 2 marks

Section C: Each question carries 3 marks

SECTION - A

1. At what point will the line represented by $x - y = 8$ intersect x- axis 1

   (A) (0, 0) (B) (0, 8) (C) (8, 0) D (0, -8)

2. The pair of linear equations $2x - y = 3$ *and* $4x - y = 5$ *have* 1

   (A) Unique solution (B) many solutions (C) no solution (D) exactly two solutions

3. Which of the following is not a solution of the pair of equations $3x - 2y = 4$ 1

   and $6x - 4y = 8$

   (A) x = 2, y = 1 (B) x = 4, y = 4 (C) x = 6, y = 7 (D) x =5, y = 3

SECTION - B

4. Given the linear equation $9x = 2y + 5$, write another linear equation in these two variables such that the geometrical representation of the pair so formed is: 2

   (i) Intersecting lines, (ii) parallel lines

5. If the larger of two complementary angles exceeds the smaller by30^0, find the angles 2

6. Solve by substitution: 2

   $x - y = 2$

   $3x + 2y = 16$

7. For what value of k, does the pair of equations below has a unique solution? 2

$2x + ky = 6$

$4x + 6y = 0$

SECTION - C

8. Draw the graph of the following pair of linear equations: 3

$x + y = 7$

$2x - 3y = 9$

Determine the coordinates of the vertices of the triangle formed by these lines and y-axis. Also, shade the triangular region.

9. Solve for x and y 3

$7x - 2y = 5xy$

$8x + 7y = 15xy$

10. Sum of the ages of a father and the son is 40years. If father's age is three times that of his son, then find their respective ages 3

End of the Question Paper

ROLL NUMBER				

SET C

INDIAN SCHOOL MUSCAT

FIRST PERIODIC TEST

MATHEMATICS

CLASS: X | Sub. Code: 041 | Time Allotted: 50 mts.

18.04.2022 | Max. Marks: 20

GENERAL INSTRUCTIONS: Answer all Questions

Section A: Each question carries 1 mark

Section B: Each question carries 2 marks

Section C: Each question carries 3 marks

SECTION - A

1. At what point will the line represented by $2x - y = 8$ intersect y- axis 1

   (A) (0, 0) (B) (0, 8) (C) (8, 0) D (0, -8)

2. The pair of linear equations $x + 2y = 4$ *and* $3x + 6y = 12$ *have* 1

   (A) Unique solution (B) many solutions (C) no solution (D) exactly two solutions

3. The pair of linear equations $kx - y = 2$ *and* $6x - 2y = 3$ *has unique solution if*: 1

   (A) k = 3 (B) $k \neq 3$ (C) $k \neq 0$ (D) k = 0

SECTION - B

4. Given the linear equation$x - 2y - 6 = 0$, write another linear equation in these two variables such that the geometrical representation of the pair so formed is: 2
   (i) Intersecting lines, (ii) parallel lines.
5. The difference between two supplementary angles is 22^0. Find the angles. 2
6. Solve by substitution: 2
   $x - 4y = 2$
   $x + 3y = 9$
7. For what value of k, does the pair of equations below has a unique solution? 2
   $2x + y = 8$
   $5x - cy = 8$

SECTION - C

8. Draw the graph of the following pair of linear equations 3

$2y - 3x = 14$

$2x + 3y = 8$

Determine the coordinates of the vertices of the triangle formed by these lines and y-axis. Also, shade the triangular region.

9. Solve for x and y 3

$6x + 3y = 6xy$

$2x + 4y = 5xy$

10. Two years ago, Ram was thrice as old as his daughter and six years later, he will be four years older than twice her age. How old are they now? 3

End of the Question Paper