

**VILLA THERESA HIGH SCHOOL
FINAL EXAM
STD 8 MATHEMATICS**

DATE: 2.3.2021

**MARKS: 40
TIME: 1 hr**

Answer Any 4 out of 5 questions

Question 1

- A. 1) Name the following (2)
- (i) A quadrilateral with two lines of symmetry which are diagonals.
 - (ii) A quadrilateral with a diagonal as the line of symmetry.
- 2) How many vertices does a polyhedron have if it has 24 edges and 10 faces? (1)
- B. If $U = \{1,2,3,4,5,6,7,8,9,10\}$, $A = \{2,3,4,6\}$, $B = \{2,4,6,8,10\}$. Find
- (i) $A \cap B$ (ii) $n(A \cup B)$ (iii) $n(B' \cap A)$ (3)
- C. Solve graphically $2x + y = 4$; $x - y = 5$ (4)

Question 2

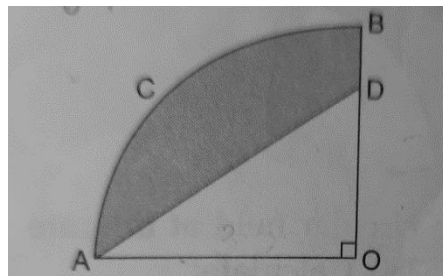
- A. A journey of 240 km costs Rs. 4080. How much distance will cost Rs. 7344? (3)
- B. Solve $31x + 37y = 25$; $37x + 31y = 43$ (3)
- C. The diagonals of a rhombus are 16 cm and 12 cm. Find
- (i) its area (ii) length of its side (iii) its perimeter (4)

Question 3

- A. If 78 men can do a work in 140 days, in how many days will 42 men do the same work? (3)
- B. A rectangular solid of metal has dimensions 50 cm, 64 cm and 72 cm. It is melted and recasted into identical cubes each with edge 4 cm. Find the number of cubes formed. (3)
- C. Twice one number minus thrice a second number is equal to two and the sum of these numbers is 11. Find the numbers. (4)

Question 4

- A. If 1 is added to the numerator and 3 to the denominator of a fraction, it becomes $\frac{1}{2}$. If 1 is subtracted from the numerator and 2 is added to the denominator, it becomes $\frac{2}{5}$. Find the fraction. (3)
- B. OACB is a quadrant of a circle of radius 3.5 cm with centre O. If OD = 2 cm, calculate the area of the shaded region (3)



- C. Jyoti alone can knit a sweater in 4 hours and Meera alone can knit a sweater in 6 hours. How much time would they take working together to knit (i) 1 sweater (ii) 15 sweaters (4)

Question 5

- A. The cost of 7 kg of sugar and 5 kg of rice is Rs.354, and the cost of 6 kg of sugar and 7 kg of rice is Rs.393. Find the cost of sugar and rice per kg. (3)
- B. The area of a trapezium is 210 sq cm and its height is 14 cm. If one of the parallel sides is longer than the other by 6 cm, find the parallel sides. (3)
- C. Given $n(A - B) = 25$, $n(B - A) = 20$, $n(A \cup B) = 52$. Find
(i) $n(A \cap B)$ (ii) $n(A)$ (iii) $n(B)$ (4)
