

SECTION-A**(40Marks)****1. (MCQ)****[10]**

- (i) A ribbon of length $5\frac{1}{4}m$ is cut into small pieces each of length $\frac{3}{4}m$. Number of pieces will be
 (a) 5 (b) 6 (c) 7 (d) 8
- (ii) The product of 0.002 and 0.5 is
 (a) 0.0001 (b) 0.001 (c) 0.1 (d) 0.01
- (iii) The coefficient of x in $-4xy^3z$ is
 (a) $-y^3z$ (b) xy^3z (c) $-4y^3z$ (d) $4y^3z$
- (iv) The two supplementary angles are in the ratio 1 : 2, then the smaller angle is
 (a) 30° (b) 60° (c) 90° (d) 120°
- (v) How many integers lie between -213 and -5103 ?
 (a) -4889 (b) 4889 (c) 4890 (d) -4890
- (vi) 0.46 when converted into common fraction is ____
 (a) $\frac{11}{25}$ (b) $\frac{46}{1000}$ (c) $\frac{23}{50}$ (d) $\frac{46}{10}$
- (vii) What is the value of $\frac{4^0}{(-1)^4}$?
 (a) -4 (b) 4 (c) -1 (d) 1
- (viii) What is the degree of the polynomial $x^3 - 2x^2y + 3y^2x - y^3x$?
 (a) 2 (b) 13 (c) 4 (d) 3
- (ix) The complement of 50° is
 (a) 90° (b) 40° (c) 130° (d) 180°
- (x) If $(3a + 5)$ and $(2a - 25)$ are supplementary angles, then smaller angle is
 (a) 30° (b) 55° (c) 80° (d) 85°

2. Do as directed.**[2×15=30]**

- (a) Add $1\frac{3}{5} + 1\frac{2}{15} + 2\frac{7}{10}$.
- (b) Divide 0.9045 by 2.01.
- (c) Represent $\frac{-7}{3}$ on the number line.
- (d) Which rational number should be subtracted from 0.25 to get $\frac{1}{2}$?
- (e) A $\frac{4}{7}kg$ pineapple is cut into 2 equal pieces. Find the weight of each piece.
- (f) Pick out the like terms $3x^2yz$, $-2xyz$, $4xzy$, $3y^2xz$, $5zyx$

(g) Find the complement and supplement of $18^\circ 53' 29''$.

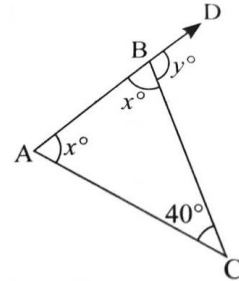
(h) Find the value of $\frac{(45)^4}{3^6 \times 25}$ using laws of exponents

(i) Arrange the following in descending order $\frac{3}{7}, \frac{2}{3}, \frac{1}{3}, 1\frac{4}{7}, \frac{5}{7}$

(j) Can the following angle form interior angles of a triangle ?

$\angle P = 10^\circ, \angle Q = 150^\circ, \angle R = 10^\circ$. Give reasons.

(k) Find the values of x and y from the figure



(l) Find $7\frac{1}{7} \times 2\frac{4}{5} \times 3\frac{3}{4}$

(m) One angle of a triangle measures 40° and the other two are in the ratio 1:3. Find these angles.

(n) Simplify $1500 - 1200 + 1030 + (-1080)$

(o) Find the value of $\frac{(-1)^6 \times (-1)^7 \times (-1)^8}{(-1)^3 \times (-1)^5}$

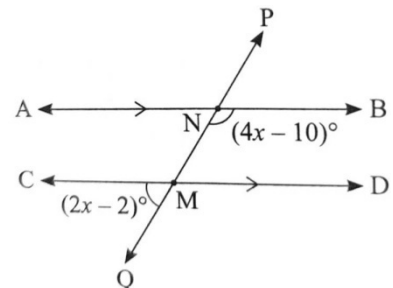
SECTION-B

3. Answer any Four.

[3+3+4]

(a) By how much is the difference of 5.063 and 6.035 less than their sum?

(b) Given that AB is parallel to CD. Find the value of x.



(c) Simplify $\frac{1}{13} \left\{ \frac{1}{2} + 3 \left(2\frac{3}{5} - 4\frac{1}{3} - 2\frac{1}{2} \right) - \frac{1}{5} \right\}$

4. (a) Simplify using laws of exponents and write in positive exponent form.

[3+3+4]

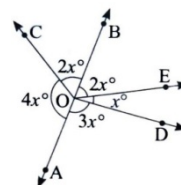
$$\frac{a^{-7} \times b^{-7} \times c^5 \times d^4}{a^3 \times b^{-5} \times c^{-3} \times d^8}$$

(a) The multiplicative inverse of $\frac{1}{2}$ is added to the additive inverse of -3 . What is the sum obtained?

(b) A library has fiction, non fiction and reference books. $\frac{5}{9}$ of all the books in the library are works of fiction and $\frac{2}{15}$ are works of non fiction. If there are 7294 reference books, how many non fiction books are there in the library?

5. (a) Find the value of all angles marked in the figure.

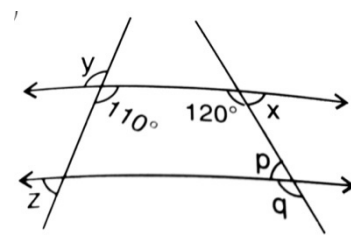
[3+3+4]



(b) Simplify : $(-3) \text{ of } [-1 - 6 \div \{4 \times (-1) + 3\}] \div (-3)$

(c) Subtract $8a^2b - 7b^2$ from $5a^2 - 9ab^2 + 3b^2$ and subtract the result from the sum of the two expressions $4ab^2 + 3b^2 - a^2b$ and $2a^2b + 7a^2 - 4ab^2$.

6. (a) Insert 3 rational numbers between $\frac{1}{2}$ and $\frac{-1}{2}$
- (b) Simplify $0.1 \text{ of } (0.1 + 0.1) + 0.1 \div 0.1 - 0.1 \text{ of } 0.1$
- (c) Find the unknown angles.

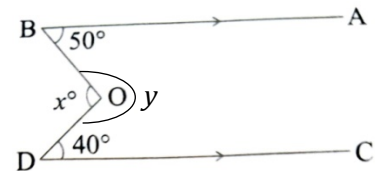


[3+3+4]

7. (a) Simplify $2x - [3y + \{5x - (3y - 2x) - 2\}]$
- (b) Simplify using laws of exponents

$$\frac{(42)^3 \times (30)^3}{64 \times 729 \times (35)^3}$$

- (c) Find the value of x and y from the figure where AB parallel to CD. $\angle ABO = 50^\circ$ and $\angle CDO = 40^\circ$.



*****ALL THE BEST*****