Class: VII
Subject: Mathematics

Topics:

CH-2	Fractions and Decimals	CH-4	Simple Equations
CH-5	Lines and Angles	CH-6	Triangles and Its Properties
CH-9	Rational Numbers	CH- 13	Exponents and Powers
CH-14	Symmetry		

A) **Choose the correct alternatives in each of the following:**

Q1. $\left(\frac{3}{2}\right)^4$ is equal to

a) $\frac{81}{16}$ b) $\frac{-81}{16}$ c) $\frac{16}{81}$ d) $\frac{-16}{81}$

Q2. Reciprocal of $2\frac{2}{5}$ is

a) $5\frac{3}{2}$ b) $3\frac{2}{5}$ c) $2\frac{3}{5}$ d) $\frac{5}{13}$

Q3. To get number 40, the number $6\frac{2}{9}$ should be multiplied with

a) $7\frac{3}{6}$ b) $6\frac{3}{7}$ c) $3\frac{6}{7}$ d) $6\frac{2}{7}$

Q4. Which of the following statement is true?
a) $1.16 > 1.4$ b) $1.16 < 1.2$ c) $1.163 > 1.170$ d) $1.14 < 1.040$

Q5. The rational number which is neither positive nor negative is

a) 0   b) $\frac{1}{0}$ c) 1   d) None of these

Q6. Absolute value of $\frac{-3}{2}$ is

a) $\frac{3}{2}$ b) $\frac{2}{3}$ c) $\frac{-3}{2}$ d) None of these

Q7. Thrice of a number when decreased by 7 gives 8. The number is
a) 4   b) -4   c) 3   d) 5

Q8. If 4P - 10 = -2, then the value of P is
a) 3   b) -2   c) 2   d) 1

Q9. When two lines intersect at a point, number of pairs of adjacent angles formed are
a) 4   b) 3   c) 2   d) 6

Q10. The supplement of an angle of 68^0 is
a) 22^0 b) 142^0 c) 122^0 d) 112^0

Q11. In a right angled triangle, right angled at B, if AB = 5cm, AC = 13cm, then BC is equal to
a) 8cm   b) 12cm   c) 10cm   d) 5cm

Q12. Which of the following is not a pythagorean triplet?
a) 5, 12, 13   b) 10, 15, 25   c) 15, 36, 39   d) 10, 24, 26

Q13. $\left(\frac{7}{5}\right)^0 - \left(\frac{4}{5}\right)^0 - 1$ is equal to

a) $\frac{3}{5}$ b) -2   c) -1   d) $\frac{2}{5}$

Q14. $25 \div \dfrac{1}{5} = ?$

    a)   5   b) $\dfrac{1}{5}$ c)   125   d) $\dfrac{1}{125}$

Q15. 0.24 when expressed in the form of $\dfrac{P}{q}$ is

    a) $\dfrac{6}{25}$ b) $\dfrac{4}{25}$ c) $\dfrac{24}{10}$ d) $\dfrac{3}{25}$

Q16. A number is added to $\dfrac{-7}{9}$ and the result is $\dfrac{5}{9}$. The number is

    a) $-\dfrac{2}{9}$ b) $\dfrac{3}{4}$ c) $\dfrac{4}{3}$ d) $\dfrac{2}{9}$

Q17. The root of $2y + 3 = 7$ is

    a)   -2   b)   2   c)   3   d)   4

Q18. If I take $\dfrac{2}{5}$ of a number and add 2 to it, I get 8. The number that I took is

    a)   14   b)   15   c)   12   d)   15

Q19. AOB is a straight line, a ray OC stands on it, if $\angle AOC = 145^0$, then $\angle BOC$ is equal to

    a) 55^0 b) 45^0 c) 35^0 d) 145^0

Q20. An angle is equal to 5 times of its complement, then its measure is

    a) 25^0 b) 50^0 c) 75^0 d) 60^0

B)   **Very short answer type question:**

Q1.   Arrange in descending order: $\dfrac{4}{-9}, \dfrac{-5}{6}, \dfrac{-2}{3}$

Q2.   What should be added to $\dfrac{11}{48}$ to get $\dfrac{13}{16}$
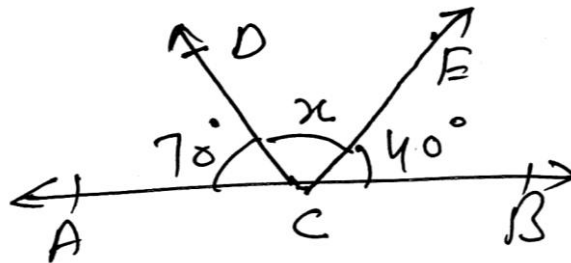
Q3.   If the cost of a book is ` 29.75. Find the cost of 32 such books.

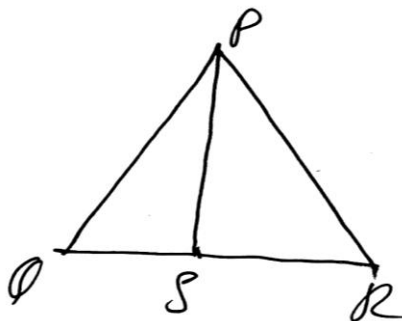Q4.   Express the following in exponential notation.

         $\dfrac{16}{625}, \dfrac{-1}{27}$

Q5.   By what number should we multiply $\left(\dfrac{1}{5}\right)^7$ so that the product is equal to 5?

Q6.   Find the value of x.

Q7.   In the given figure, 'S' is a point on the side QR of ΔPQR. Prove that $PQ + QR + PR > 2PS$.

Q8. The sides of a triangle are of lengths 6.5cm, 6cm and 2.5cm. Is this triangle is a right triangle? If so, which is the hypotenuse?

C) **Short answer type question:**

Q1. The product of two numbers is $1\frac{1}{5}$. If one of the numbers is $\frac{4}{5}$. Find the other number.

Q2. Find the area of rectangle whose length is 18.60m and breadth is 7.05m.

Q3. Subtract $\frac{11}{20}$ from $\frac{-4}{5}$. Add $\frac{-9}{10}$ to the answer.

Q4. Divide the sum of $\frac{65}{9}$ and $\frac{-11}{-3}$ by the product of $\frac{7}{6}$ and $\frac{5}{-3}$.

Q5. The numerator of a fraction is 3 less than the denominator. If 1 is added to both its numerator and denominator, it becomes $\frac{2}{3}$. Find the fraction.

Q6. In the given figure, if AB||CD, find the value of x and y.
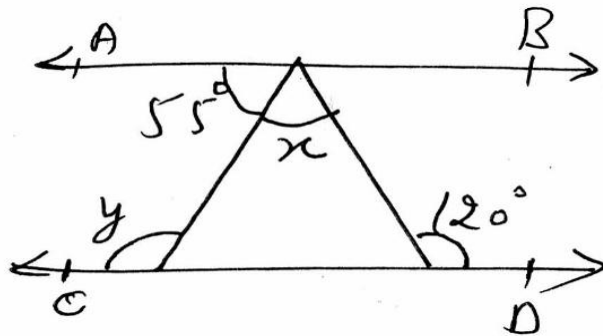
Q7. Find the length of the diagonal of a rectangle whose sides are 15cm and 8cm.

Q8. An exterior angle of a triangle measure 120^0 and its interior opposite angle are in the ratio of 5 : 7. Find the angles of the triangle.

D) **Long answer type question:**

Q1. Find the value of x in each of the following:

a) $\left(\frac{2}{7}\right)^{-3} \times \left(\frac{2}{7}\right)^{-11} = \left(\frac{2}{7}\right)^{7x}$

b) $\left(\frac{1}{5}\right)^{-3} \times \left(\frac{1}{5}\right)^{-5} = \left(\frac{1}{5}\right)^{x}$

Q2. Simplify:

a) $\left(2 \times \frac{3}{4}\right) + \left[\frac{4}{3} + \left(\frac{3}{-2}\right)\right]$

b) $\left[\frac{20}{8} \times \left(\frac{-24}{15}\right)\right] - \left[8 \times \left(\frac{1}{-2}\right)\right]$
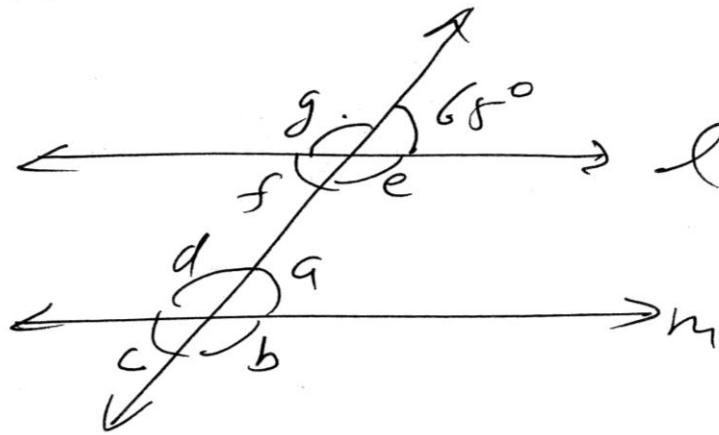
Q3. The total weight of contain bags of rice is 650.16kg. If each bag weigh 10.32kg. Find the number of bags.

Q4. A car covers a distance of $189\frac{1}{3}$ km in $4\frac{4}{9}$ hours. Find the distance covered in one hour.

Q5. Write the following numbers in standard form.

i)   3080   ii) 856.23400   iii) 38000000000

Q6.   In a given figure L||M. Find the unknown angles.

Q7.   The diagonals of a rhombus are 30cm and 16cm. Find its perimeter.

Q8.   In the given figure, find the length of AC.