

FATHER AGNEL SCHOOL, VAISHALI

MATHEMATICS WORKSHEET

CLASS VII

TOPIC: RATIONAL NUMBERS

1) Represent the following rational numbers on the number line:

a)  $-\frac{3}{4}$  b)  $\frac{31}{-6}$  c)  $-\frac{1}{2}$  d)  $\frac{3}{4}$

2) Write the following rational numbers in the standard form:

a)  $\frac{5}{15}$  b)  $-\frac{24}{40}$  c)  $\frac{33}{-77}$  d)  $-\frac{45}{-105}$

3) Compare the following rational numbers:

1)  $-\frac{9}{27}$ ,  $\frac{6}{-18}$  2)  $-\frac{5}{7}$ ,  $\frac{10}{-6}$

3)  $\frac{3}{-8}$ ,  $-\frac{15}{40}$  4)  $-\frac{11}{7}$ ,  $\frac{33}{21}$

4) Arrange the following rational numbers in the descending order:

1)  $\frac{2}{-3}$ ,  $-\frac{4}{9}$ ,  $-\frac{5}{12}$ ,  $\frac{7}{-18}$

2)  $\frac{3}{-4}$ ,  $-\frac{5}{12}$ ,  $-\frac{7}{16}$ ,  $\frac{9}{-24}$

5) Arrange the following rational numbers in the ascending order:

1)  $\frac{2}{5}$ ,  $\frac{1}{3}$ ,  $\frac{3}{4}$ ,  $\frac{1}{6}$  2)  $\frac{5}{6}$ ,  $\frac{7}{8}$ ,  $\frac{11}{12}$ ,  $\frac{3}{10}$

6) Add:

1)  $\frac{3}{7}$  and  $-\frac{9}{7}$ , 2)  $\frac{5}{9}$  and  $\frac{7}{-9}$

3)  $\frac{2}{5}$ ,  $\frac{5}{-9}$  and  $-\frac{6}{15}$

7) Simplify: 1)  $-2 + (\frac{3}{8}) + (-\frac{1}{5})$ , 2)  $(\frac{2}{3}) + (-\frac{7}{11}) + (-\frac{1}{4})$

8) Verify that  $a + b = b + a$  by taking

(1)  $a = -\frac{7}{5}$ ,  $b = \frac{2}{7}$

(2)  $a = -1$ ,  $b = -\frac{2}{3}$

9) Verify that  $(a+b)+c = a+(b+c)$  by taking

(1)  $a = -2$ ,  $b = -\frac{2}{3}$ ,  $c = -\frac{3}{4}$

(2)  $a = -12$ ,  $b = -\frac{9}{11}$ ,  $c = \frac{7}{-12}$

10) Simplify the following:

1)  $(\frac{2}{3}) + (-\frac{4}{5}) + 1 + (-\frac{2}{3}) + (-\frac{11}{5})$

2)  $(\frac{5}{8}) + (-\frac{8}{9}) + 0 + (-\frac{13}{3}) + (\frac{17}{24})$

11) Subtract : 1)  $(-\frac{3}{4})$  from  $(\frac{1}{2})$  2)  $(\frac{5}{8})$  from  $(-\frac{3}{14})$

12) What should be added to  $(-\frac{7}{20})$  to get  $(-\frac{2}{5})$ ?

- 13) The sum of two rational numbers is  $(-3/7)$ . If one of the number is  $(-5/8)$  find the other.
- 14) The sum of two rational numbers is  $(-5/8)$ . If one of the number is  $(-6/11)$ , find the other number.
- 15) To which number should  $(2/3)$  be added to give  $(-11/4)$ ?
- 16) From which number should  $(-11/4)$  be subtracted to give  $(-11/4)$ ?
- 17) Find the product of :
- 1)  $5/9, -2/5$     2)  $-5, -3/15$
- 18) Multiply, and give the product in the standard form:
- 1)  $-6/25$  by  $50/24$     2)  $3/11$  by  $22$   
 3)  $21/5$  by  $-15/21$     4)  $-36$  by  $-5/9$
- 19) Verify the property  $a \times b = b \times a$  by taking :
- 1)  $a = (-12/7), b = (-21/5)$     2)  $a = 0, b = (-13/3)$
- 20) Verify the property  $a \times (b \times c) = (a \times b) \times c$  by taking
- 1)  $a = (7/5), b = (-9/4), c = (1/2)$   
 2)  $a = 1, b = (-13/5), c = (3/5)$
- 21) Verify the property  $ax(b+c)=(axb)+(axc)$  by taking:
- 1)  $a = (1/3), b = 0, c = (-7/6)$   
 2)  $a = -2, b = (9/5), c = (-2/15)$
- 22) The product of two rational numbers is 6. If one of them is 8, find the other number.
- 23) By what number should  $(-6/11)$  be multiplied to get  $(-32/11)$ ?
- 24) Find the rational number between:
- 1) 3 and 4    2) -7 and -6
- 25) Find three rational numbers between:
- 1) -5 and 8    2)  $(-1/3)$  and  $(1/2)$
- 26) State whether true or false: (practice worksheet on rational numbers)
- 1) Absolute value of a rational number is either positive or 0.  
 2) There are countless rational numbers with absolute value less than 5.  
 3) The absolute value of 0 is 0.
- 27) The sum of two rational numbers is  $\frac{-5}{8}$ . If one of them is  $\frac{-2}{3}$ , find the other.
- 28) Simplify:  $2\frac{1}{4} + 5\frac{5}{8} \times 1\frac{1}{3} \div 1\frac{1}{2}$
- 29) Find a rational no. which in standard form is equal to  $\frac{4}{5}$ , and the sum of its numerator and denominator is 27.

30) Arrange each of the following in ascending order:-

a)  $\frac{-1}{5}, \frac{3}{-2}, \frac{12}{4}, \frac{12}{5}$

b) If you have to arrange health, wealth and character in ascending order of importance, arrange it according to your priority.

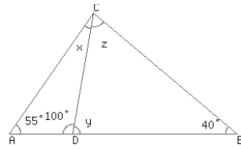
FATHER AGNEL SCHOOL, VAISHALI

MATHEMATICS WORKSHEET

CLASS VII

TOPIC: THE TRIANGLE AND ITS PROPERTIES

Answer the questions



(1) Find the value of  $z$  ?

(2) In a triangle if each angle is less than sum of other two angles, What is the type of this triangle?

Choose correct answer(s) from given choice

(3) The hypotenuse of a right angle triangle is 25 cm long. If one of the remaining side is 24 cm long, what is the length of another side?

a) 8 cm b) 5 cm c) 7 cm d) 6 cm

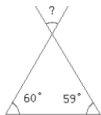
(4) If 2 angles in a triangle add upto  $124^\circ$  then what is the value of the third angle?

a)  $146^\circ$  b)  $124^\circ$  c)  $56^\circ$  d)  $34^\circ$

(5) In a triangle ABC if  $CB = AB$  and angle  $\angle B = 100^\circ$ , find the value of angle  $\angle A$ .

a)  $50^\circ$  b)  $100^\circ$  c)  $40^\circ$  d)  $35^\circ$

(6) Find value of missing angle:

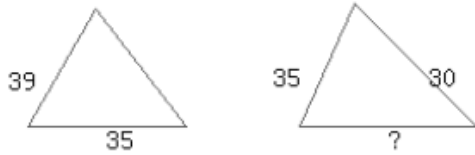


a)  $51^\circ$  b)  $66^\circ$  c)  $61^\circ$  d)  $56^\circ$

(7) A right angle triangle, one of the angles is  $53^\circ$ . Which of the following can be another of the angles in the triangle?

a)  $32^\circ$  b)  $44^\circ$  c)  $37^\circ$  d)  $127^\circ$

(8) If two triangles are congruent, find missing dimension in second triangle



- a) 39   b) 35   c) 40   d) 30

(9) Harsh is walking in north direction. After walking 5 meters, he takes a right turn and walks another 9 meters. He then takes a left turn and walks 7 meters. He again takes a right turn and walks another 7 meters. How far is he from starting point?

- a) 4 meters   b) 28 meters   c) 20 meters   d) 19 meters

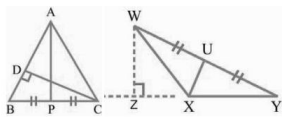
(10) In a triangle ABC, if  $\angle A > \angle C$ , which of the following is true.

- a)  $AB < AC$    b)  $CB > AB$    c)  $AB > CB$    d)  $AB > AC$

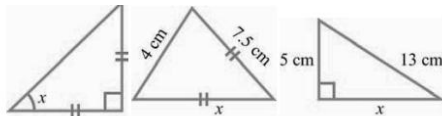
(11) If angle  $\angle A$  is a right angle, find perimeter of the triangle (All dimensions are in cm)

- a) 120 cm   b) 122 cm   c) 125 cm   d) 118 cm

(12) Identify the median and altitude in the following:



(13) Find 'x' in each of the following:



(14) Find the unknown angles:

