SA1 PORTIONS

- L-1 INTEGERS
- L-2 FRACTIONS AND DECIMALS
- L-3 DATA HANDLING
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- L-5 LINES AND ANGLES
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INTERNATIONAL INDIAN SCHOOL DAMMAM

MATHEMATICS WORKSHEET 2015-16  BMS CLASS: VII

INTEGERS

1) Fill in the blanks
   a) \(-35 \times \text{_______} = 35\)
   b) \(-59 \div \text{_______} = -1\)
   c) \(8 \times \left[-5 \times 4\right] = \left[8 \times \text{_______}\right] \times 5\)
   d) \(-20 - 80 = -10\)
   e) \(-20 = 4X\text{_______}\)
   f) \((-112) \div \text{_______} = 1\)
   g) \((-6 + 5) \div \text{_______} = \left[-4 + 3\right]\)
   h) \text{_______} integer should be added to -7 to get 3

2) Write down a pair of integers whose
   i) Difference is -2
   ii) Sum is 0
   iii) Sum is -12
   (iv) difference is -15

3) Write a negative and positive integer whose sum is -5

4) Verify and name the property used
   (i) \(25 \times (-21) + 25 \times (-9) = 25 \times \left[(-21) + (-9)\right]\)
   (ii) \((-18 \times 5) \times (-4) = (-65) \times (5 \times -4)\)

5) Find the product by using suitable properties
   a) \((-102) \times 53\)
   b) \((-125) \times 742 \times (-8)\)
   c) \((-75) \times (-101) + (-75)\)
   d) \(-73 \times 98\)
   e) \((-1732) \times 82 + 18 \times (-1732)\)
   f) \((-51) \times 99 + (-51)\)
6) The product of two integers is -960 if one of them is 4 find the other

7) An elevator descends into a mineshaft at the rate of 5m per minute
   a) If it start 15m above the ground how long will it take to reach 235m down the earth?
   b) If the descent starts from the round level what will be the position after 20 minutes.

8) Evaluate
   a) \([-20+20] ÷ -5\]
   b) \([-15 + 5] ÷ [-2 +1]\]
   c) \(-18 + [15÷ -3]\)
   d) \([-28÷4] x (-3)\]
   e) \((-1) x (-3) x (-5) x (-7)\)
   f) \([-39 ÷ 13] + (-2)\)

9) Verify that \(a÷ (b+c) \neq (a÷b) + (a÷c)\)
   \(a = -20\) \(b = 4\) \(c = 2\)

10) In a class test of 15 questions (+4) marks are given for correct answer and (-2) for wrong answer. Ali attempts all questions but only 10 answers are correct what is his score? Ayaan attempts all questions but only 7 are wrong what is his score?

11) The temperature at 2pm was 12°C above zero. If it decreases at the rate of 2°C per hour until midnight at what time would the temperature be 4°C below zero?

12) Shayaan earns a profit of Rs1 by selling one text book and suffers a loss of 25 paisa by selling one note book
   a) One day he earns Rs10, if he sells 50 text book how many note books did he sell?
International Indian School, Dammam
Class: VII       Maths Worksheet: 2015-2016 Lines and angles

Fill up the blanks
1. _____________ has its both ends extending infinitely.
2. _____________ has one end point.
3. A line that intersects two other lines is called a _____________.
4. Interior angles on the same side of the transversal are _____________.
5. When a transversal intersect two parallel lines, ____________ and
   _____________ angles are equal.

Solve the following:
1. Find the complementary angles for these:
   a) 65°       b) 87°       c) 29°
2. Find the supplementary angles for these:
   a) 120°      b) 75°      c) 45°
3. Identify which of the following are supplementary or complementary:
   a) 50°, 40°   b) 130°, 50°  c) 45°, 45°   d) 105°, 75°
3. Find \(\angle x\) and \(\angle y\) in each of the following, listing the reasons.
1. Rani ate $\frac{2}{7}$ part of a cake while her brother Ravi ate $\frac{4}{5}$ of the remaining. Part of the cake left is __________

2. The reciprocal of $\frac{3}{7}$ is __________

3. $\frac{1}{2}$ of $\frac{4}{7}$ is __________

4. The lowest form of the product $\frac{2}{7} \times \frac{7}{9}$ is __________

5. $93.5 \times 100 = ________$

6. $4.7 \div 1000 = ________$

7. The product of two proper fractions is ____ than each of the fractions that are multiplied.

8. While dividing a fraction by another fraction, we _______ the first fraction by the ______ of the other fraction.

9. $0.5 \underline{______} 0.7 = 0.35$

10. $2.001 \div 0.003 = ________$

11. If 5 is added to both the numerator and the denominator of the fraction $\frac{5}{9}$ will the value of the fraction be changed? If so, will the value increase or decrease?

12. What happens to the value of a fraction if the denominator of the fraction is decreased while numerator is kept unchanged?

13. Which letter comes $\frac{2}{5}$ of the way among A and J?

14. Reemu read $\frac{1}{5}$ th pages of a book. If she reads further 40 pages, she would have read $\frac{7}{10}$ th pages of the book. How many pages are left to be read?

15. Describe two methods to compare $\frac{13}{17}$ and 0.82. Which do you think is easier and why?

16. To find the distance around a circular disc, multiply the diameter of the disc by
3.14. What is the distance around the disc when:

(a) the diameter is 18.7 cm?

(b) the radius is 6.45 cm?

17. What is the cost of 27.5 m of cloth at Rs. 53.50 per meter?

18. Heena's father paid an electric bill of Rs. 385.70 out of a 500 rupee note. How much change should he have received?

19. The normal body temperature is 98.6°F. When Savitri was ill her temperature rose to 103.1°F. How many degrees above normal was that?

20. \(\frac{1}{8}\) of a number equals \(\frac{2}{5} + \frac{1}{20}\). What is the number?

21. Measurement made in science lab must be as accurate as possible. Ravi measured the length of an iron rod and said it was 19.34 cm long; Kamal said 19.25 cm; and Tabish said 19.27 cm. The correct length was 19.33 cm. How much of error was made by each of the boys?

22. A picture hall has seats for 820 persons. At a recent film show, one usher guessed it was \(\frac{3}{5}\) full, another that it was \(\frac{2}{3}\) full. The ticket office reported 648 sales. Which usher (first or second) made the better guess?

23. For the celebrating children's day, students of Class VII bought sweets for Rs. 740.25 and cold drinks for Rs. 70. If 35 students contributed equally what amount was contributed by each student?

24. The weight of an object on moon is \(\frac{1}{6}\) its weight on Earth. If an object weighs \(5\frac{3}{5}\) kg on Earth, how much would it weigh on the moon?

25. In the morning, a milkman filled \(5\frac{1}{2}\) L of milk in his can. He sold to Renu, Kamla and Renuka \(\frac{3}{4}\) L each; to Shadma he sold \(\frac{7}{8}\) L; and to Jassi he gave \(1\frac{1}{2}\) L. How much milk is left in the can?

26. Kajol has Rs. 75. This is \(\frac{3}{8}\) of the amount she earned. How much did she earn?
1. Answer the following equations.
   a. Find the solution of the equation $ax + b = 0$.
   b. If $k + 7 = 16$; then what is the value of $8k - 72$?
   c. If $x/2 = 3$; then what is the value of $3x + 2$?
   d. Shifting one term from one side of an equation to another side with a change of sign is known as ..................

2. Frame the following equations and solve
   a. 6 times a number added to 10 is 58.
   b. If you subtract 13 from 6 times a number, you get 5.
   c. One-third of a number plus 5 is 8.
   d. Mohan is 3 years older than Sohan. The sum of their age is 43 years.

3. Solve
   a. $16x - 7 = 12$
   b. $2(x - 2) + 3(4x - 1) = 0$
   c. $4 - 5(p - 1) = 34$
   e. $5a + 1/3 = 9$
   f. $3(k + 1) = 24$
   g. $9(1 - x) + 5 = 7(5 + x)$

4. Solve the following problems.
   a. One of the two numbers is twice the other. The sum of the numbers is 12. Find the numbers.
   b. A number when divided by 6 gives the quotient 6. What is the number?
   c. Five times a number added to 2 gives 37. What is the number?
   d. The perimeter of a rectangle is 40m. The length of the rectangle is 4m less than 5 times its breadth. Find the length of the rectangle.
   e. The sum of two consecutive multiples of 2 is 18. Find the numbers.
1. There are ______ number of rational numbers between two rational numbers.

2. The rational number ______ is neither positive nor negative.

3. The reciprocal of $\frac{-1}{2}$ is ______

4. The standard form of $\frac{-48}{60}$ is ______

5. In the standard form of a rational number, the denominator is always ______

6. Additive inverse of $\frac{3}{5}$ is ______

7. $0 + \frac{-5}{6} = ______$

8. List 5 rational numbers between

   a) $\frac{4}{5}$ & $\frac{5}{6}$   b) $\frac{-1}{3}$ & $\frac{1}{3}$   c) $\frac{-1}{2}$ & $\frac{-1}{3}$   d) 0 & -1   e) -3 & -4   f) $\frac{1}{6}$ & $\frac{1}{9}$

9. Fill the box with correct symbol, $>, <, =$

   a) $\frac{5}{6} \square \frac{8}{4}$
   b) $\frac{-9}{7} \square \frac{4}{-3}$
   c) $\frac{-3}{5} \square \frac{-3}{7}$
   d) $\frac{3}{7} \square \frac{4}{-3}$
   e) 0 $\square \frac{2}{-3}$
   f) $\frac{-3}{-5} \square \frac{3}{5}$

10. Reduce the following rational number in standard form.

    a) $\frac{-60}{72}$  b) $\frac{14}{-49}$  c) $\frac{-15}{35}$  d) $\frac{299}{-161}$
    e) $\frac{-12}{-30}$  f) $\frac{91}{-364}$

11. Arrange the rational numbers $\frac{-7}{10}, \frac{5}{8}, -\frac{2}{3}, -\frac{3}{5}$ in ascending order.

12. Represent the following rational numbers on a number line.

    a) $\frac{3}{8}$  b) $\frac{-7}{3}$  c) $\frac{-5}{7}$
    d) $\frac{5}{9}$  e) $\frac{3}{4}$  f) $\frac{-11}{8}$
15. Are the rational numbers $\frac{-8}{28}$ and $\frac{32}{-112}$ equivalent. Give reason.

16. Solve -

a) $\frac{8}{13} + \frac{3}{11}$  
b) $\frac{7}{3} + \frac{-4}{3}$  
c) $\frac{29}{4} - \frac{30}{7}$  
d) $\frac{5}{13} - \frac{-8}{26}$  
e) $\frac{-4}{5} \times \frac{-5}{12}$

f) $\frac{-22}{11} \times \frac{-21}{11}$  
g) $\frac{3}{7} \times \frac{21}{-55}$  
h) $0 \div \frac{-1}{2}$  
i) $1 \div \frac{-1}{2}  
j) \frac{-2}{9} + \frac{-7}{9}$

k) $\frac{3}{4} \times \frac{-2}{3}$  
l) $\frac{-3}{7} \div \frac{-7}{3}$

17. Match the following

<table>
<thead>
<tr>
<th>Column-1</th>
<th>Column-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) $\frac{3}{4} \div \frac{3}{4}$</td>
<td>(a) $-1$</td>
</tr>
<tr>
<td>(ii) $\frac{1}{2} \div \frac{4}{3}$</td>
<td>(b) $\frac{2}{3}$</td>
</tr>
<tr>
<td>(iii) $\frac{2}{3} \div -1$</td>
<td>c) $\frac{3}{2}$</td>
</tr>
<tr>
<td>(iv) $\frac{3}{4} \div \frac{1}{2}$</td>
<td>d) $\frac{3}{8}$</td>
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<tr>
<td>(v) $\frac{5}{7} \div \frac{-5}{7}$</td>
<td>(e) $1$</td>
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</table>
1. The monthly pocket money of 8 friends is given in Rs as follows.
   50,45,32,44,25,53,31,28
   a) What is the highest pocket money?
   b) What is the lowest pocket money?
   c) What is the range?
   d) What is the arithmetic mean?
   e) How many get more pocket money than the mean pocket money?

2. The marks of 30 students in Mathematics (out of 100) are given.

   52,60,50,61,76,67,100,68,90,74,89,76,38,85,57,59,49,61,55,45,57,53,63,60,72,36,
   51,59,54
   a) What is the highest score?
   b) What is the lowest score?
   c) What is the range?
   d) If 40 is the passing mark, how many students failed?
   e) How many students scored 75 marks or more?

3. Find the mean and median of first 15
   a) Whole numbers
   b) Natural numbers
   c) Even numbers
   d) Prime numbers

4. Find the mean, median and mode of the following data
   a) 88, 70, 82, 64, 85, 70, 87, 83, 75
   b) 30, 28, 32, 32, 36, 32, 35, 30, 35, 32, 34
   c) 15, 14, 17, 14, 16, 15, 16, 18, 14, 14, 13, 15, 13, 17, 18, 14, 15, 16, 13, 16, 14, 17, 16
5. The children in Rajat’s cricket club have the following ages (in years)
10, 12, 14, 13, 14, 11, 10, 14, 13, 13, 14, 14, 15, 13, 12, 12, 10, 11, 11, 14, 10, 13, 11, 13, 12, 14, 15, 12, 10

Find the mode of their ages by making a frequency distribution table.

6.

The runs scored by two teams A and B in the first 10 overs of a cricket match are given.

<table>
<thead>
<tr>
<th>Overs</th>
<th>I</th>
<th>II</th>
<th>III</th>
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<th>VII</th>
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<tbody>
<tr>
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</table>

Draw a double bar graph to represent the above data.

The performance of a student in quarterly and half yearly examination is shown through the double bar graph.

7.

![Bar Graph]

(i) In which subject has the student improved his performance the most?
(ii) In which subject is the improvement the least?
(iii) Has the performance gone down in any subject?

The maximum and minimum temperature (in °C) on a particular day are given in the table. Draw a double bar graph to represent the given data.