

**REVISION WORKSHEET**

**GRADE-VIII**

**MATHEMATICS**

**LINEAR EQUATION IN ONE VARIABLE**

ANSWER THE FOLLOWING QUESTIONS:

I.  Solve following:

 1. 2x – 6 = 0

2. 7x – 2 = 8 - x

3. 8 – 2x = 5 – 4x

4. 4 + 3x = 2 – 2x

5. 2(x – 1) + 2(3x -1) = 0

6. 4(x-1) –(2x – 5) = 4

7. 2x – $\frac{2}{3}$= $\frac{3}{4}$ – x

8. 3x + 2(x+2) = 10 – (2x – 5)

9. 10(y – 4) – 2(y – 9) – 5(y + 4) = 0

10. 6(3x + 2) – 5(6x – 1) = 2(x – 8) – 5(7x – 6) + 8x

11. t – (2t +5) – (1- 2t) = (3 + 4t) – 2(t - 4)

12. 2x – 3 = $\frac{3}{10} $x (5x – 10)

**DATA HANDLING**

1) Populations (in hundreds) of 50 towns and villages of a state, taken at

random from a census report are: 72,15,8,15,3,23,26,2,119,200,6,16,6,111,5,18,140,99,127,31,72,18,30,4

 3,2, 1,52,40,3,7,13,5,142,70,86,31,38,70,51,11,52,18,46,89,1,30,25,4,52

 Prepare a grouped frequency table for the above data, using class intervals

 0-30, 30-60,60-90 and so on. Also find the class with maximum frequency

2. Draw a histogram to represent the following data:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| HEIGHTS | 140-145 | 145-150 | 150-155 | 155-160 | 160-165 | 165-170 |
| NO.OF STUDENTS | 6 | 10 | 15 | 18 | 2 | 1 |

**3.** Given below is the data on weights (kg) of 30 students:

 68,62,59,50,65,61,58,37,54,58,60,54,41,47,63,59,53,68,63,69,51,60,59,

 68,60,38,46,58,68,52

 Prepare a grouped frequency distribution table choosing appropriate

 class intervals and draw a histogram.

4. A dice is rolled once. What is the probability that a number that will

 appear will be

i. Odd ii. Greater than 1

iii. Greater than 6 iv. A multiple of 3

v. A factor of 6 vi. Greater than 0

5. Construct a frequency distribution table for the data on weights(kg.) of 20

 students of a class, using intervals 30-40, 35-40 and so on

 40, 38, 33, 48, 60, 53, 31, 46, 34, 36, 49, 41, 55, 49, 55, 42, 44, 47, 47,

 38, 39. Do we need to have the class intervals 0-10,10-20 and 20-30

 Why?

6.Populations(in hundreds) of 50 towns and villages of a state , taken at

 random from a census report are:

11, 72, 15, 8, 15, 3, 23, 26, 2, 119, 200, 6, 16, 6, 111, 5,18,140,99,127,3172,18,30,43,2,1,52,40,3,7,13,5,142,70,86,31,38,70,51,11,52,18,46,89,1,30,25,4,52

Prepare a grouped frequency table for the above data, using class intervals 0-30, 30-60,60-90 and so on. Also find the class with maximum frequency.

**SQUARE AND SQUARE ROOTS**

1. Find the squares of :

a) (-15) b) 120

2. Find which of them might be a square number:

a) 123 b) 144 c) 576 d) 782

3. Which of the following are squares of odd number?

a) 529 b) 4096 c) 2601 d) 1936

4. Find the number of numbers between:

a) $52^{2}$ and $53^{2}$ b) $12^{2}$ and $13^{2}$ c) $24^{2}$ and $25^{2}$

5. Find the Pythagorean triplet whose one member is :

a) 7 b) 13 c) 11

 6. Find the square root of 324 by repeated subtraction method.

7. Find the square root by prime factorization method:

a) 1024 b) 4096

8. Find the square root by long division method:

a) 5476 b) 4225

9. Find the smallest number by which 79380 must be multiplied to get a

 perfect square.

10. Find the square root of:

a) 46.24 b) 82.81

11. Find the least number to be divided from 3528 to make it a perfect

 square. Also find the square root of the new number formed.

12. Find the least number to be added to 8400 to make it a perfect square.

 Also find the square root of the new number formed.

13. Find the smallest square number which is exactly divisible by 3, 5, 8 ,

 12, 15 and 20.

**EXPONENTS AND POWERS**

1. Find the value of 𝑥 if

5 𝑥 = 125.

2. Evaluate

$ (3^{0 }X 5^{0})^{5}$ .

3. Write the reciprocal of

(i) $\left( \frac{7}{8 }\right)^{-2}$ (ii) $9^{7}$ .

4. Evaluate

(i) $\frac{8^{-1} X 5^{3}}{2^{-4}}$ (ii) $\left( \frac{5}{8} \right)^{-7}$X $\left( \frac{8}{5} \right)^{-4}$

5. Find 𝑥 so that

$a)(-7)^{X+1} X \left(-7\right)^{7}= \left(7\right)^{19}$.

b) **52x+1 ÷ 25 = 125,**

**c)**  (-3)3x+1 × (-3)4 = (-3)8

6. Use the laws of exponents and simplify:

(i) $\frac{4^{-3 }X a^{-5} X b^{-4}}{4^{-5} X a^{-8} X b^{3}}$ ii) $\left[\left( \frac{3}{4} \right)^{-1}\right]^{-2}$

7. Simplify and find their values:

(i) $\left( \frac{3 }{7}\right)^{-5}X \left(\frac{7}{11}\right)^{-4} X \left(\frac{11}{3}\right)^{-6}$

8. (i) $\left(-1\right)^{-325}$ is \_\_\_\_\_\_\_\_\_\_\_\_.

(ii) Standard form of 3289000000 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(iii) Standard form of 0.0000009 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

(iv) Usual form of 3.61492 X $10^{6}$ is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**DIRECT AND INVERSE PROPORTION**

1. In direct proportion the relation between the quantities x and y is of the

 form \_\_\_\_\_\_.

2. If xy = k then x and y are in \_\_\_\_\_\_\_\_ proportion.

3. A machine takes 5 hours in cutting 120 tools. How many tools will it cut

 in 20 hours?

4. An electric pole 14m high, casts a shadow of 10m. Find the height of a

 tree that casts a shadow of 15m under similar conditions.

5. 28 stamps of equal value costs Rs 96. How many stamps of the same

 value can be bought for Rs 144. 6. If the thickness of 750 sheets of a

 paper is 6cm then what would be the thickness of 650 sheets of same

 paper?

7. If 6 pipes are required to fill a tank in 1 hr 20 min, how long will it take for

 5 pipes to fill the same tank.

8. 5 men can build a fence in 14 days. If 7 men are employed, find the

 number of days in which the fence will be built?

9. 600 men take 30 days to complete a job. How many men are needed to

 complete the work in 25 days?

10. In a hostel of 80 girls, food provision would last for 60 days. If 20 more

 girls join, how long will the provisions last.

11. Working 6 hours a day, Amer can copy a book in 25 days. How many

 hours a day should she work so as to finish the work in 10 days?

**PRATICAL GEOMENTRY**

1) Draw quadrilateral ABCD , AB = 5cm , BC = 3cm , CD = 5cm , AD = 4cm

 and AC = 6cm.

2) Construct quadrilateral ABCD where AB = 5cm , BC = 7cm , AD = 4cm ,

 AC = 9cm , BD = 6cm.

3) Construct quadrilateral ABCD , AB = 7cm , AD = 4cm , ∟A = 70º , ∟B =

 60º and ∟C = 130º .

4) Construct quadrilateral ABCD , AB = 5cm , AD = 4cm , BC = 6cm , ∟A =

 90º and ∟B = 120º .

**5)** Construct a quadrilateral PQRS, given that QR = 4.5 cm, PS = 5.5 cm,

 RS = 5 cm and the diagonal PR = 5.5 cm and diagonal SQ = 7 cm.

6) Construct a quadrilateral ABCD in which AB = 4 cm, BC = 3.5 cm, CD =

 5 cm, AD = 5.5 cm and ∠B = 75°.