



**HOLIDAY HOMEWORK 2017-18**

**CLASS X**

**ENGLISH** : Do a research on any one rare disease, its causes, symptoms and cure if any. Write a report of about 250 words in A4 size papers.

**L 2 - HINDI:** Do the given worksheet in 200 page long note book.

- 1 घर बेचने व किराए पर देने से संबंधित विज्ञापन तैयार कीजिए।
- 2 स्वच्छता के बारे में माँ-बेटी के बीच संवाद लिखिए।
- 3 व्याकरण प्रवेश
  - 1 पेज 194 अभ्यास 5
  - 2 पुस्तकालय में हिंदी पुस्तकें उपलब्ध कराने हेतु प्राचार्य को प्रार्थना पत्र लिखिए।

**L-2 (TELUGU)** : Do the given homework in 200 page single ruled long note book.

రామాయణంలోని బాలకాండం, అయోధ్యకాండం, అరణ్యకాండం లను చదివి మీ తరగతిలో ఇచ్చిన ప్రశ్నలకు సమాధానాలు రాయాలి. నేర్చుకొనిరావాలి.

**MATHEMATICS** : Do the given worksheet in 200 page long assignment note book.

**SCIENCE** : Prepare a project file in A4 size papers with relevant pictures in **Sources of Energy**- page no255, Q no 4,5,6,8,9,11 from your Science Text Book.

**SOCIAL STUDIES** : Disaster Management: Chapter 3: Survival Skills

(Page No.s 25 – 29)

Prepare a pocket diary illustrating various types of first aid to be provided during accidents, like fractures, burns, animal bites, etc.

**NOTE :** Holiday homework to be submitted on the reopening day. School reopens on 12<sup>th</sup> June, 2017.

Class: X Subject: Mathematics ASSIGNMENT 1: April 2017 Chapter: PAIR OF LINEAR EQUATIONS IN 2 VARIABLES

1. Solve graphically the following pairs of linear equations:

(i)  $2x - y = 4$

$3y - x = 3$

Also, find the coordinates of the points where these lines intersect the 2 axes.

(ii)  $2x + 3y = 12$

$x - y = 1$

Shade the region (area) between the 2 lines and x axis.

2. Find graphically the coordinates of the vertices of a triangle whose sides have the equations:

(i)  $y = x$ ,  $y = 0$  and  $2x + 3y = 30$

(iii)  $y = x$ ,  $3y = x$  and  $x + y = 8$

(ii)  $2y - x = 8$ ,  $5y - x = 14$  and  $y - 2x = 1$

3. Plot a graph for each of the following pairs of equations and shade the region bounded by the 2 lines and the x-axis.

(i)  $x - y + 1 = 0$

(ii)  $4x - 3y + 4 = 0$

(iii)  $2x + y = 6$

(iv)  $x + y = 5$

$2x + y - 10 = 0$

$4x + 3y - 20 = 0$

$2x - y + 2 = 0$

$2x - y + 2 = 0$

4. Solve the following pair of linear equations graphically:  $3x + y - 11 = 0$ ;  $x - y - 1 = 0$

Shade the region bound by these lines and the axis of y.

5. Solve each of the following pairs of linear equations graphically:

(i)  $5x - 6y + 30 = 0$

(ii)  $3x - 4y + 6 = 0$

$5x + 4y - 20 = 0$

$3x + y - 9 = 0$

6. Solve the following pairs of equations:

(i)  $5m - 5n = 12$ ;  $2m + 9n = 20$

(vi)  $39x + 41y = 76$ ;  $41x + 39y = 84$

(ii)  $\frac{4}{x} + 5y = 7$

(vii)  $\frac{x}{a} + \frac{y}{b} = a + b$

$\frac{3}{x} + 4y = 5$

$\frac{x}{a^2} + \frac{y}{b^2} = 2$

(iii)  $x - y = 0.9$

(viii)  $a(x + y) + b(x - y) = a^2 + b^2 - ab$

$\frac{11}{x + y} = 2$

$a(x + y) - b(x - y) = a^2 + b^2 + ab$

(iv)  $8x - 3y = 5xy$ ;  $6x - 5y = -2xy$

(ix)  $\frac{x}{a} - \frac{y}{b} = a - b$ ;  $\frac{x}{a^2} - \frac{y}{b^2} = 0$  ( $a \neq b$ )

(v)  $99x + 101y = 499$ ;  $101x + 99y = 501$

7. If  $2x + y = 35$  and  $3x + 4y = 65$ , find the value of  $\frac{x}{y}$

8. Find the value of c for which the pair of equations :  $2x + cy = 1$ ;  $3x + 5y = 7$  will have

(i) a unique solution; (ii) no solution. Is there a value of c for which the system has infinite number of solutions?

9. Find the value of k for which the following pairs of equations have unique solutions:

(i)  $7x - 2y = 3$ ;  $22x - ky = 8$

(ii)  $2x + ky = 1$ ;  $3x - 5y = 7$

(iii)  $2x + 3y - 5 = 0$ ;  $kx - 6y - 8 = 0$

10. For what value(s) of k will the pair of linear equations:  $kx + 3y = k - 3$ ;  $12x + ky = k$  have a unique solution?

11. Last year 1 kg of tea and 3 kg of sugar together cost Rs 96. This year, the rates of tea increased by 15% and that of sugar by 10%. So the amount of tea and sugar now cost Rs. 108.60. Find the per kg rates of tea & sugar last year.

12. A boat goes 24 km upstream & 28 km downstream in 6 hours. In 6.5 hours, it can go 30 km upstream & 21 km downstream. Find the speed of stream and the speed of boat in still water.

13. A person invests some amount @ 12% S.I. and some other amount @ 10% S.I. He receives an annual interest of Rs.1300. But if he interchanges the amounts invested, he shall receive Rs.40 more as interest. How much has he invested at each rate?

14. If 1 is added to both the numerator and the denominator of a fraction, it becomes equal to  $\frac{7}{8}$ . If, however, 1 is subtracted from both the numerator & denominator of the same fraction, it becomes equal to  $\frac{6}{7}$ . Find the fraction.

15. The age of a father 8 yrs back was 5 times that of his son. Find the present age of the father and the son.