

Kulachi Hansraj Model School

Winter Break Practice Work: Class 7

General Instructions:

- Make a separate register for practice during the winter break. Practice work of all the subjects to be done in the same register.
- Download the sample papers of term 2 (all subjects) from the website and solve them in the same register. Sample papers are available on the snap homework also.
- **Learn the Dharam Shiksha chapters of final term. All the chapter materials are shared on the snap homework.**

Also do the following in the same register.

Subject	Practice Work												
Science	<p>1. Chapter- Light</p> <ul style="list-style-type: none"> ● Draw ray diagrams to show image formation for different position of object by concave mirror and convex mirror. Also write the nature, position and size of image formed in each case. ● Draw the image of an object obtained by plane mirror. <p>2. With the help of a diagram show</p> <ul style="list-style-type: none"> ● Charging by contact or conduction ● Charging by induction <p>3. Draw neat and labelled diagram of the following</p> <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">i.</td> <td>Budding in yeast</td> </tr> <tr> <td>ii.</td> <td>Spirogyra</td> </tr> <tr> <td>iii.</td> <td>Bread Mould</td> </tr> <tr> <td>iv.</td> <td>Parts of a flower</td> </tr> <tr> <td>v.</td> <td>Soil profile</td> </tr> <tr> <td>vi.</td> <td>Soil percolation</td> </tr> </table>	i.	Budding in yeast	ii.	Spirogyra	iii.	Bread Mould	iv.	Parts of a flower	v.	Soil profile	vi.	Soil percolation
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Social Science	<p>Complete the activity on modes of transport and their importance with pictures. Complete your 'Academic Support Material' booklet.</p>												
Mathematics	<p>Do the given assignment in practice register.</p> <p style="text-align: center;">Winter Assignments Class 7 Mathematics</p> <p>1. Convert the following statements into equations.</p> <p>(a) 5 added to a number is 9.</p>												

(b) 3 subtracted from a number is equal to 12.

(c) 5 times a number decreased by 2 is 4.

(d) 2 times the sum of the number x and 7 is 13.

2. A number is 12 more than the other. Find the numbers if their sum is 48.

3. Twice the number decreased by 22 is 48. Find the number.

4. Seven times the number is 36 less than 10 times the number. Find the number.

5. $\frac{4}{5}$ of a number is more than $\frac{3}{4}$ of the number by 5. Find the number.

6. The sum of two consecutive even numbers is 38. Find the numbers.

7. The sum of three consecutive odd numbers is 51. Find the numbers.

8. Rene is 6 years older than her younger sister. After 10 years, the sum of their ages will be 50 years. Find their present ages.

9. The length of a rectangle is 10 m more than its breadth. If the perimeter of rectangle is 80 m, find the dimensions of the rectangle.

10. A 300 m long wire is used to fence a rectangular plot whose length is twice its width. Find the length and breadth of the plot.

11. The denominator of a fraction is greater than the numerator by 8. If the numerator is increased by 17 and denominator is decreased by 1, the number obtained is $\frac{3}{2}$, find the fraction.

12. Find the product of: (i) $6xy$ and $-3x^2y^3$

(ii) $7ab^2$, $-4a^2b$ and $-5abc$

(iii) $5a^2b^2 \times (3a^2 - 4ab + 6b^2)$

(iv) $(-3x^2y) \times (4x^2y - 3xy^2 + 4x - 5y)$

(v) $(3x + 5y)$ and $(5x - 7y)$

(vi) $(3x^2 + y^2)$ by $(2x^2 + 3y^2)$

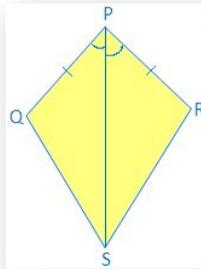
13. Multiply: (i) $(5x^2 - 6x + 9)$ by $(2x - 3)$

(ii) $(2x^2 - 5x + 4)$ by $(x^2 + 7x - 8)$

(iii) $(2x^3 - 5x^2 - x + 7)$ by $(3 - 2x + 4x^2)$

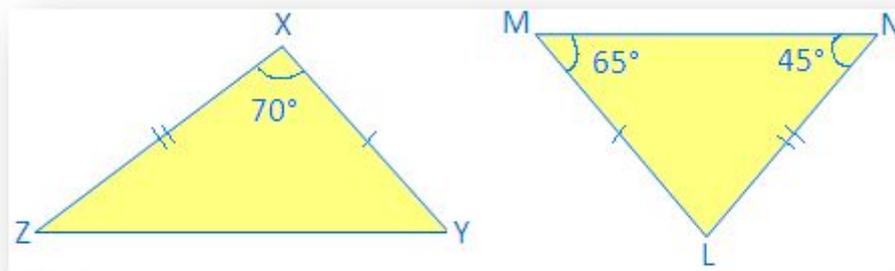
14. In the kite shown, $PQ = PS$ and $\angle QPR = \angle SPR$.

(i) Find the third pair of corresponding parts to make $\triangle PQR \cong \triangle PSR$ by SAS congruence condition.

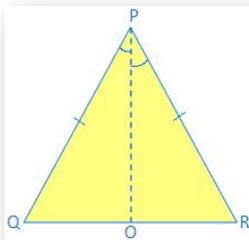


(ii) Is $\angle QRP = \angle SRP$?

15. Identify the congruent triangle:

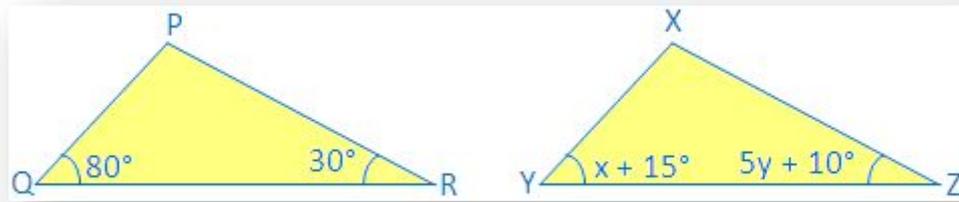


16. By using SAS congruency prove that, angles opposite to equal side of an isosceles triangle are equal.



17. $\triangle PQR \cong \triangle XYZ$ by ASA congruence condition. Find the value of x and y .

Problems on Angle Side Angle Congruence



18. ΔPQR is an isosceles triangle such that $PQ = PR$, prove that the altitude PO from P on QR bisects PQ .

19. ΔXYZ is an isosceles triangle such that $XY = XZ$, prove that the altitude XO from X on YZ bisects YZ .

20. In the adjoining figure, given that $AB = BC$, $YB = BZ$, $BA \perp XY$ and $BC \perp XZ$. Prove that $XY = XZ$

21. Find the mean of the following data.

(a) 9, 7, 11, 13, 2, 4, 5, 5

(b) 16, 18, 19, 21, 23, 23, 27, 29, 29, 35

(c) 2.2, 10.2, 14.7, 5.9, 4.9, 11.1, 10.5

22. Find the mean of first ten whole numbers.

23. Find the mean of first 5 prime numbers

24. The mean of 8, 11, 6, 14, x and 13 is 66. Find the value of the observation x .

25. The mean of 6, 8, $x + 2$, 10, $2x - 1$, and 2 is 9. Find the value of x and also the value of the observation in the data.

26. The runs scored in a cricket match by 11 players is as follows:

7, 16, 121, 51, 101, 81, 1, 16, 9, 11, 16

Find the mean, mode, median of this data.

27. A race track is in the form of a ring whose inner circumference is 220 m and outer circumference is 308 m. Find the width of the track.

28. The area of a circle is 616 cm^2 . Find its circumference.

29. Find the area of the circle if its circumference is 132 cm.

- 30.** The ratio of areas of two wheels is 25 : 49. Find the ratio of their radii.
- 31.** A piece of wire in the form of rectangle 40 cm long and 26 cm wide is again bent to form a circle. Find the radius of the circle.
- 32.** Draw a triangle ABC in which AB = 5 cm, BC = 7 cm, and $\angle B = 75^\circ$
- 33.** Draw a triangle ABC in which AB = 4.5 cm, BC = 6 cm, and $\angle B = 80^\circ$.
- 34.** Draw a right angled triangle at C in which AB = 7 cm and BC = 5 cm
- 35.** Draw a right angled triangle at C in which XY = 7.5 cm and YZ = 5.5 cm.
- 36.** Write down all the factors of $3x^2y$.
- 37.** Find the H.C.F. of $2m^3n^2$, $10m^2n^3$, $8mn$
- 38.** Subtract $4a + 5b - 3c$ from $6a - 3b + c$
- 39.** Subtract $3x^2 - 6x - 4$ from $5 + x - 2x^2$.
40. Write an algebraic expression for each verbal expression.
- (a) a number m minus five
- (b) the sum of two times a number k and seven
- (c) the product of 7 and m to the fifth power.