

CHAPTER 3

(Data Handling)

Q:-1. Find mean and median of
(a) First ten odd numbers
(b) First seven multiples of 4

Q:-2. Give two examples of
(a) Sure event
(b) Impossible event

Q:-3. From Numbers 1,3,5,7,8,11,15 a number is to be picked up at random, what is the probability of choosing a number
(a) less than 8
(b) 5 or more

Ans: [(i) $\frac{4}{7}$ (ii) $\frac{5}{7}$]

Q:-4. Mean of 9 numbers is 14. One number 12 was excluded. Find the new mean.
[Ans: 14.25]

Q:-5. The marks (Out of 100) obtained by a group of students in science test are
85, 76, 90, 85, 39, 48, 39, 95, 81, 75

Find

- (i) Range of the marks obtained
- (ii) Mean marks obtained
- (iii) Mode and Median of the data

Q:- 6

Sport	Cricket	Basket Ball	Swimming	Hockey	Athletics
Watching	1240	470	510	430	250
Participating	620	320	520	250	110

Draw double bar graph choosing an appropriate scale

- (i) Which sport is the most popular?

(ii) Which is more preferred- watching or participating in sport?

Q7:- For each of the following data , draw Frequency table and then the Bar graph

(1.i)Ages (in years) of students of a class

14 ,13 ,12 , 14 ,15 ,13 ,14, 16 ,15 ,14

13 ,12 ,13 ,12 ,15 ,14 ,14 ,13 ,13 ,12

13 ,14 , 15, 12, 12, 13, 13, 14, 15, 15 .

(1.ii) Heights (in cm) of students of a class

160 ,158 ,165, 159 ,160 ,160, 158 ,158 ,159 ,165

158 ,159, 165 ,158 ,158 ,159 ,160 ,165 ,159 ,165

161 ,160 ,156 , 158 , 159 , 160 ,161 , 165 , 156 , 161 .

CHAPTER - 4 **(Simple equations)**

Q:- 1. Solve the following equations and verify your answer.

(i) $3(x + 7) = 18$

(ii) $2(x - 1) = x + 2$

(Ans: -1, 4)

Q:-2. If 5 is added to twice a number the result is 29. Find the number.

(Ans: -12)

Q:- 3. Solve:-

(i) $(2x/3) - 5 = (3x/4) + 1$

(ii) $(2p - 1)/2 + \frac{1}{4} = (p+1)/6$

(iii) $(3m-5)/2 = (2m-5)/3$

Q:- 4. The length of a rectangular floor is 5 m longer than the width. If the perimeter of the floor is 86m, find the dimensions of the floor.

(Length= 19m)

Q:- 5. Find two consecutive even numbers whose sum is 73.

(Ans: 36, 37)

Q:- 6. Sunil's father is 3 times as old as Sunil. After 10 years his age will be twice the age of his son. Find their present ages.

(Ans: 10 years, 30 years)

Q:- 7. Thrice a number when decreased by one fourth of a number gives 11. Find the number.

(Ans: 4)

Q:- 8. Two sides of an isosceles triangle are $(3x-1)$ units and $(2x+2)$ units. Third side is $2x$ units. Find x and perimeter of triangle.

(Ans: 3, 22 units)

Q:- 9. One -third of a number exceeds one -sixth of the number by 4. Find the number?

Q:- 10. The cost of 2 tables and 5 chairs is Rs. 2300. If a table cost Rs. 30 more than a chair find the price of each

[Ans: Rs. 320, Rs. 350]

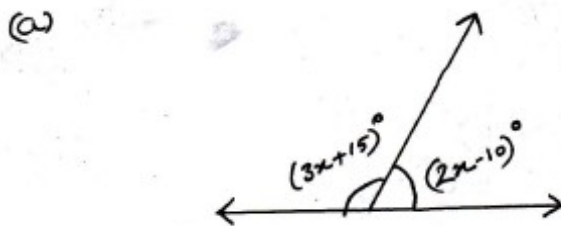
Q:- 11. In a lottery, a total of 200 prizes are to be given. A prize is either of Rs. 500 or Rs. 100. Find the number of each type of prizes if the total prize money is Rs. 50,000

[Ans: 75 and 125]

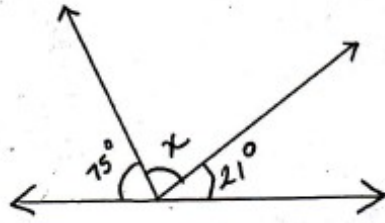
CHAPTER -5 LINES AND ANGLES

Q:-1 Find the value of x in each of the following cases.

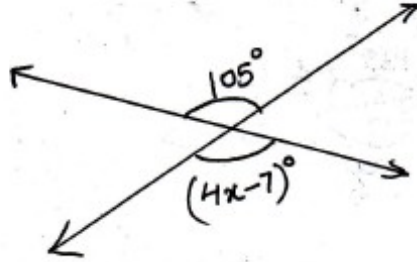
{Ans: (a) 35° , (b) 84° , (c) 28° }



(b)



(c)



Q:-2. Two supplementary angles are in the ratio of 2:7, find the angles

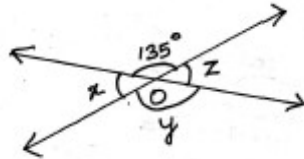
[Ans: 40° , 140°]

Q:-3. Two complementary angles are $(x+4)$ and $(2x-7)$, find the value of x .

[Ans: 35° , 55°]

Q:- 4. Find the values of 'x', 'y' and 'z' in the given figure.

[Ans: [$x = 45^\circ$, $y = 135^\circ$, $z = 45^\circ$],



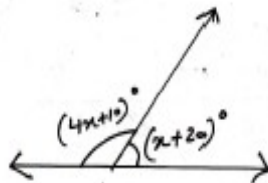
Q:- 5. In the adjoining figure, the value of 'x' that will make AOB a straight line is:

(i) $x=40^\circ$

(ii) $x=35^\circ$

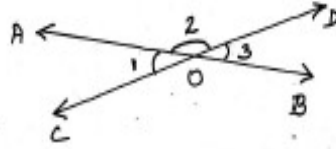
(iii) $x=30^\circ$

(iv) $x=25^\circ$



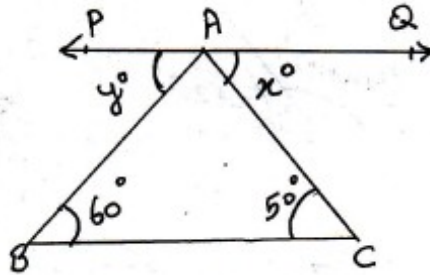
Q:- 6. In the adjoining figure, lines AB and CD intersect at O. If $L1 + L3 = 78^\circ$ find the measure of L2.

(Ans: $L2=141^\circ$)



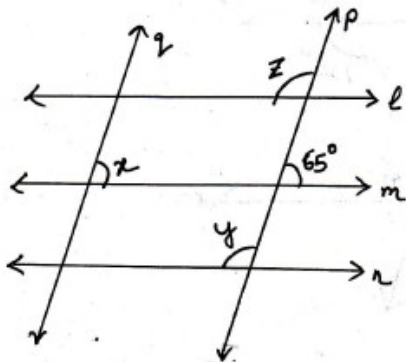
Q:- 7. In the given figure, find the value of 'x' and 'y' if $PQ \parallel BC$

(Ans: $x=50^\circ, y=60^\circ$)

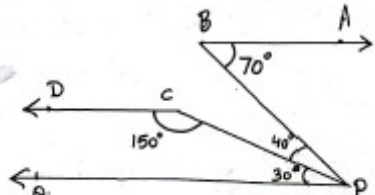


Q:- 8. Find the values of 'x', 'y' and 'z' if $l \parallel m \parallel n$ and $p \parallel q$

(Ans: $x=65^\circ, y=115^\circ, z=115^\circ$)

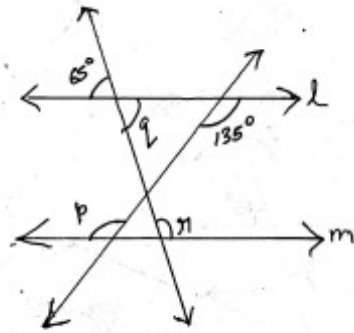


Q:- 9. In the given figure, show that $AB \parallel CD$



Q;-10. Calculate the measure of each indicated angle in the following figure.

(Ans: $p=135^\circ, q=65^\circ, r=115^\circ$)



CHAPTER - 6

Triangles and its properties

Q:- 1. A picture frame is of 80 cm by 60 cm. Find its diagonal.

(Ans: 100 cm)

Q:-2. A pilot is flying south west. After flying 50 km, he knows that he is 30 km west from the starting point. How far south from the starting point.

(Ans: 40 km)

Q:-3. Is it possible to have a triangle with the following sides?

- 2cm, 3cm, 5cm
- 4.5 cm, 2.5 cm, 8 cm
- 10.2 cm, 5.8 cm, 4.5 cm
- 3.4 cm, 4.7 cm, 6.2 cm

Ans: {N, N, Y, Y}

Q:-4. If the length of two sides of a triangle are 7 cm and 10 cm. What can be the length of the third side.

Ans: $\{3 < x < 17\}$

Q:-5. Find the area and perimeter of a rectangle whose length is 15 cm and diagonal is 17 cm.

(Ans: 120 cm, 46 cm)

Q:-6. If the diagonals of a rhombus measure 10 cm and 24 cm. Find the perimeter.

(Ans: 52 cm)

Q:-7. If the two acute angles of a right triangle are in the ratio of 7:8, find these angles
(Ans: 42° , 48°)

Q:-8. If the angles of a triangle are $(3x)$, $(2x-7)$ and $(4x-11)$, then find the value of x .
{Ans: 22° }

Q:-9. In an isosceles triangle, the vertical angle is 15 more than each of its base angles. Find all the angles of the triangle.
{Ans: 55° , 55° , 70° }

CHAPTER 13 EXPONENTS AND POWERS

Q:-1. Fill in the blanks:-

(a)	$2^0 \times 3 =$	(b)	$12^5 \times 12^2 \times 12^8 =$
(c)	$(-1)^{2017} \times (-9)^2 =$	(d)	$([-8]^3)^2 =$
(e)	$3^5 \times 8^5 =$	(f)	$18^3 / 9^3 =$
(g)	$13^2 \times (-1)^6 =$	(h)	$(-30)^3 \times 10^2 =$
(i)	$5^0 \times 6^0 \times 7^0 =$	(j)	$(-2)^x = 128$, then $x =$

Q:- 2. Write the following in exponential form with prime number as a base.

(a) $(-8)^3$ (b) $(27)^2$

Q:-3. Evaluate

(a) $3^4 \times 9$ (b) $2^6 \times 10$
(c) $5^2 \times 25$ (d) $4^3 \times 2^2$

Q:-4. Simplify the following

(a) $(27)^3 \div (9)^2$ (b) $(2^0 \times 5^0 \times 8^0) / (2^0 + 5^0 + 8^0)$
(c) $(12^4 \times 9^3 \times 4) / (6^3 \times 8^2 \times 27)$

Q:-5. Simplify

(a) $(3^0 + 8) \div (3)^5$ (b) $((5^2)^3 \times 5^4) / 5^7$

Q:-6. Write the following in standard form

