M A T H E M A T I C S

QUESTION BANK

for

Summative Assessment - I

CLASS – VII

2015 – 16

CHAPTER WISE COVERAGE IN THE FORM
MCQ WORKSHEETS AND PRACTICE QUESTIONS

Prepared by

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PRE FACE

It gives me great pleasure in presenting the Question Bank for Summative Assessment (SA) - I. It is in accordance with the syllabus of the session 2015–16 for first term (CCE pattern).

Each chapter has a large number of multiple-choice questions in the form of Worksheets, which will help students quickly test their knowledge and skill.

A sufficient number of short answer type and long answer type questions are included in the form of PRACTICE QUESTIONS. This Question Bank is also helpful to all the teachers for internal assessment of the students.

Keeping the mind the mental level of a child, every effort has been made to introduce simple multiple choice questions so that the child solve them easily and gets confidence.

I avail this opportunity to convey my sincere thanks to respected sir, Shri S. Vijay Kumar, Director, KVS ZIET Gwalior, respected madam Smt. R. Kalavathi, Deputy Commissioner, KVS RO Hyderabad, respected sir Shri Isampal, Deputy Commissioner, KVS RO Bhopal, respected sir Shri P. V. Sairanga Rao, Deputy Commissioner, KVS RO Varanasi, respected sir Shri P. Deva Kumar, Deputy Commissioner, KVS RO Ahmedabad, respected sir Shri Y. Arun Kumar, Assistant Commissioner(Acad), KVS Headquarter, New Delhi, respected sir Shri Sirimala Sambanna, Assistant Commissioner, KVS RO Hyderabad, respected sir Shri. K. L. Nagaraju, Assistant Commissioner, KVS RO Bangalore, respected sir Shri. Gangadharaih, Assistant Commissioner, KVS RO Bangalore and respected Shri M.K. Kulshreshtha, Assistant Commissioner, KVS RO Chandigarh for their blessings, motivation and encouragement in bringing out this notes in such an excellent form.

I also extend my special thanks to respected sir Shri. P. S. Raju, Principal, KV Gachibowli, respected Smt. Nirmala Kumari M., Principal, KV Mysore & respected Shri. M. Vishwanatham, Principal, KV Raichur for their kind suggestions and motivation while preparing this Question Bank.

I would like to place on record my thanks to respected sir Shri. P. K. Chandran, Principal, presently working in KV Bambolim. I have started my career in KVS under his guidance, suggestions and motivation.

In spite of my best efforts to make this Question Bank error free, some errors might have gone unnoticed. I shall be grateful to the students and teacher if the same are brought to my notice. You may send your valuable suggestions, feedback or queries through email to kumarsir34@gmail.com that would be verified by me and the corrections would be incorporated in the next year Question Bank.

M. S. KUMARSWAMY
Dear Shri M.S.Kumarswamy,

It has been brought to my notice the good work done by you with regard to making question bank and worksheets for classes VI to X in Mathematics. I am pleased to look at your good work. Mathematics is one discipline which unfortunately and wrongly perceived as a phobia. May be lack of motivation from teachers and inadequate study habits of students is responsible for this state of affairs. Your work in this regard assumes a great significance. I hope your own students as well as students of other Vidyalayas will benefit by your venture. You may mail the material to all the Kendriya Vidyalayas of the region for their benefit. Keep up the good work.

May God bless!

Yours sincerely,

Shri M.S.Kumarswamy
TGT (Maths)
Kendriya Vidyalaya
Donimalai

Copy to: the principals, Kendriya Vidyalayas, Bangalore Region with instructions to make use of the materials prepared by Mr. M.S.Kumarswamy being forwarded separately.

Prepared by: M. S. KumarSwamy, TGT(Maths)
DEDICATED
TO
MY FATHER
LA TE SHRI. M. S. MALLAYYA
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1. 2 subtracted from 7 gives
   (a) – 9  (b) 5  (c) - 5  (d) 9

2. 5 added to – 5 gives
   (a) 10  (b) - 10  (c) 0  (d) - 25

3. 3 taken away from 0 gives
   (a) 3  (b) - 3  (c) 0  (d) not possible

4. Smallest integer is
   (a) 0  (b) - 1  (c) we cannot write  (d) – 10000

5. Which of the following statement is true:
   (a) 2 subtracted from – 3 gives 1
       (b) – 1 subtracted from – 5 gives 6
       (c) 3 subtracted from – 8 gives – 11
       (d) 1 subtracted from – 7 gives – 6

6. Absolute value of - 11 is
   (a) 10  (b) – 1  (c) 11  (d) – 11

7. The number 3 less than – 2 is
   (a) – 1  (b) 1  (c) 5  (d) – 5

8. Which of the following numbers is to the right of - 3 on number line?
   (a) -4  (b) -2  (c) -5  (d) -6

9. Which of the following number is not to the left of -10 on the number line?
   (a) -9  (b) - 11  (c) -12  (d) -13

10. The number of integers between -2 and 2 is
    (a) 5  (b) 4  (c) 3  (d) 2

11. The opposite of -7 is
    (a) – 6  (b) 6  (c) 5  (d) 7

12. Sum of two negative integers is always
    (a) Positive  (b) Negative  (c) 0  (d) 1

13. Sum of – 30 and – 12 is
    (a) 42  (b) - 18  (c) - 42  (d) 18

14. In addition and subtraction of the integers the sign of answer depends upon
    (a) Smaller Number  (b) Their Difference  (c) Their Sum  (d) Greater numerical value

15. Sum of -14 and 9 is
    (a) 23  (b) – 23  (c) – 5  (d) 5
MCQ WORKSHEET-II
CLASS – VII: CHAPTER – 1
INTEGERS

1. Which of the following number is greater than –1?
   (a) –2 (b) –10 (c) 0 (d) –3

2. The preceding number of -1 on number line is:
   (a) 0 (b) 1 (c) 2 (d) -2

3. Which number is 5 more than –3?
   (a) –2 (b) 2 (c) 8 (d) -8

4. 7 steps to the left of 4 on number line gives:
   (a) 3 (b) 11 (c) -11 (d) -3

5. 2 steps to the right of –1 on number line gives:
   (a) 0 (b) 1 (c) –3 (d) 3

6. Which number is being represented by the point A on following number line:
   (a) –9 (b) 5 (c) -5 (d) -6

7. What number is being represented by points A and B respectively on the number line:
   (a) 3 and 2 (b) 2 and 3 (c) -3 and –2 (d) 3 and –2

8. The integer succeeding -9 is:
   (b) –10 (c) -8 (d) 8

9. What will be the opposite of 3 Km south?
   (a) 3 km east (b) 3 km north (c) 3 km north east (d) 3 km west

10. Which of the following set of numbers is in descending orders?
    (a) 2, -2, 1, -1 (b) 0, 1, 2, 3 (c) 1, 0, -1, -2 (d) -3, -2, -1, 0

11. Which of the following statements is false:
    (a) 0 lies to the left of –1 (b) 2 lies to the right of 1
    (c) 1 lies to the right of 0 (d) -2 lies to the left of –1

12. 5 added to the –1 gives
    (a) 4 (b) -4 (c) 6 (d) -6
MCQ WORKSHEET-III
CLASS – VII: CHAPTER – 1
INTEGERS

1. 7 added to –1 gives
(a) 6    (b) - 6    (c) - 8    (d) 8

2. 3 added to –3 gives
(a) 0    (b) 6    (c) - 6    (d) 9

3. 1 subtracted from –1 gives
(a) 0    (b) - 1    (c) - 2    (d) 2

4. Sum of –10, -5 and 12 is
(a) 27    (b) – 3    (c) 3    (d) –27

5. Which of the following statements is false
(a) – 4 > - 5    (b) – 4 < - 5    (c) 4 < - 5    (d) 4 > - 5

6. Which of the following is in increasing order
(a) 0, 1, -1    (b) –1, -2, -3    (c) –1, 0, 1    (d) –1, 1, -2

7. Which of the following is correct
(a) – 8 > - 7    (b) 1 < 0    (c) – 1 < 0    (d) – 2 > 4

8. Which of the following number forms a pattern
(a) – 6, - 3, 0, 3    (b) – 5, - 3, - 2, 0    (c) 0, 2, 3, 4    (d) 1, 2, 4, 6

9. Sum of –36 and 29 is
(a) – 65    (b) 65    (c) – 7    (d) 7

10. Which of the following will give answer with negative sign
(a) – 48 + 79    (b) – 40 + 40    (c) – 48 + 30    (d) 48 + (-39)

11. What will be the additive inverse of -1?
(a) -2    (b) -1    (c) 0    (d) 1

12. Sum of two positive integers is always
(a) Negative    (b) positive    (c) 0    (d) 1

13. Sum of a negative and a positive integer is –
(a) Always negative    (b) either positive or negative    (c) always positive    (d) Zero

14. The pair of integers whose sum is –5
(a) 1, –4    (b) –1, 6    (c) –3, –2    (d) 5, 0

15. 39 – 50 is
(a) Not possible    (b) -89    (c) -11    (d) 10

Prepared by: M. S. KumarSwamy, TGT(Maths)
MCQ WORKSHEET-IV
CLASS – VII: CHAPTER – 1
INTEGERS

Q1. In addition and subtraction of two integers, sign of the answer depends upon
(a) Smaller number  (b) Their difference  (c) Their sum  (d) Greater numerical value

Q2. Sum of two negative number is always
(a) Positive  (b) Negative  (c) 0  (d) 1

Q3. Sum of two Positive number is always
(a) Negative  (b) Positive  (c) 1  (d) 0

Q4. Sum of –36 and 29 is
(a) –65  (b) 65  (c) –7  (d) 7

Q5. Sum of –19 and –21 is
(a) –40  (b) 40  (c) 2  (d) –2

Q6. Which of the following statement is false:
(a) –7 + (–6) = –13  (b) –5 + 1 = 4  (c) 2 + (–1) = 1
(d) 8 + (–9) = –1

Q7. The pair of integers whose sum is –5
(b) 1, –4  (b) –1, 6  (c) –3, –2  (d) 5, 0

Q8. What integers or number should be added to –5 to get 4
(a) 1  (b) –1  (c) –9  (d) 9

Q9. What will be the additive inverse of –5
(a) –6  (b) –4  (c) 3  (d) 5

Q10. What will be the additive inverse of 7
(a) –7  (b) –6  (c) –5  (d) –4

Q11. Predecessor of –9 is
(a) –8  (b) 8  (c) –10  (d) 10

Q12. Successor of –1 is
(a) –2  (b) 0  (c) 1  (d) 2

Q13. The value of 6 – (–3) is
(a) 3  (b) –9  (c) –3  (d) 9

Q14. The value of 26 – 30 is equal to
(a) 4  (b) –4  (c) –56  (d) 56

Q15. Which of the following statement is true
(a) 7 – 4 = 4 – 7  (b) 7 – 4 < 4 – 7  (c) 7 – 4 > 4 – 7  (d) 7 – 4 = –3
MCQ WORKSHEET - V
CLASS – VII: CHAPTER – 1
INTEGERS

Q1. Choose appropriate number for blank: \(-7 - (\_\_\_) = 2\)
(a) 5 (b) -5 (c) 9 (d) -9

Q2. Multiplication of 3 and -4
(a) -7 (b) 12 (c) -12 (d) 7

Q3. Multiplication of -2, -7 and -10 gives
(a) -34 (b) 19 (c) -140 (d) 90

Q4. Multiplication of 2, -5 and 0 gives
(a) 10 (b) 0 (c) -10 (d) 7

Q5. Identify the property used in the following:
\(2 \times 13 + 8 \times 13 = (2 + 8) \times 13\)
(a) Commutative (b) Closure (c) Associative (d) Distributive

Q6. Which number is multiplicative identity for the whole numbers
(a) 0 (b) 1 (c) 2 (d) 3

Q7. What will be multiplicative inverse of -8
(a) 8 (b) \(\frac{1}{8}\) (c) -\(\frac{1}{8}\) (d) 0

Q8. Which property is reflected in the following:
\(7 \times 5 = 5 \times 7\)
(a) Closure (b) Commutative (c) Associative (d) Distributive

Q9. \(-18 \div 2\) gives
(a) 36 (b) 9 (c) -9 (d) -16

Q10. \(-6 \div (-3)\) gives
(a) -9 (b) 2 (c) -2 (d) 3

Q11. 15 divided by -3 is equal to
(a) 12 (b) -12 (c) -5 (d) 5

Q12. 0 \div 10 gives
(a) 0 (b) 10 (c) 1 (d) -10

Q13. Which of the following is not true
(a) 0 \div 2 = 0 (b) -25 \div 5 = -5 (c) 12 \div 0 = 12 (d) 4 \div 1 = 4

Q14. Which of the following is true
(a) 5 \div 7 = 7 \div 5 (b) 0 \div 3 = 0 \div 5 (c) 2 \div (3 - 1) = 2 \div 3 - 2 \div 1
(d) 4 \div 1 = 1 \div 4

Q15. Which of the following does not represent pair of integer (a, b) such that \(a \div b = 2\)
(a) (-6, -3) (b) (-2, 1) (c) (-10, -5) (d) (8, 4)

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MCQ WORKSHEET - VI
CLASS – VII: CHAPTER – 1
INTEGERS

Q1. On dividing a negative integer by other negative integer the quotient will be

(a) Always negative    (b) Always positive    (c) Either positive or negative    (d) 1

Q2. Which of the following statement is true

(a) 7 ÷ 0 = 7    (b) 7 ÷ 0 = 0    (c) 7 ÷ 0 = 0 ÷ 7    (d) 0 ÷ 7 = 0

Q3. Product of two negative integers is always

(a) Always negative    (b) Always positive    (c) Either positive or negative    (d) 0

Q4. The integer whose product with –1 is –40 is

(a) 20    (b) –20    (c) –40    (d) 40

Q5. Absolute value of –11 is

(a) –10    (b) 10    (c) 11    (d) 0

Q6. –8 x 10 x 9 is equal to

(a) 27    (b) –27    (c) –720    (d) 720

Q7. 16 x 10 + 2 is equal to

(a) 162    (b) 192    (c) 52    (d) 320

Q8. –16 x (–1) is equal to

(a) –17    (b) 17    (c) 16    (d) –16

Q9. 125 ÷ (–25) is equal to

(a) 1    (b) 5    (c) –5    (d) 100

Q10. (–50) ÷ _____ = –1, number in the blank will be

(a) 49    (b) 50    (c) –50    (d) 51
PRACTICE QUESTIONS
CLASS – VII: CHAPTER – 1
INTEGERS

1. Write the opposite of each of the following:
   (i) Increase in class strength (ii) going north (iii) A loss of Rs 1000

2. Indicate the following by integers:
   (i) 25 above zero (ii) 5 below zero (iii) 300m above the sea level
   (iv) 250m below the sea level (v) A profit of Rs. 2000

3. Represent the following integers on number line:
   (i) –4    (ii) 7    (iii) –8

4. Write all the integers between:
   (i) –7 and 3    (ii) –2 and 2    (iii) –4 and 0

5. How many integers are between:
   (i) –4 and 3    (ii) 5 and 12    (iii) –9 and –2

6. Represent the following using integers with proper sign: (a) 3 km above sea level (b) A loss of Rs 500

7. Find the sum of the pairs of integers: (a) –6, –4 (b) +3, –4 (c) +4, –2

8. Find the sum of –2 and –3, using the number line.

9. Subtract: (i) 3 from –4 (ii) –3 from –4

10. Using the number line, subtract: (a) 2 from –3 (b) –2 from –3.

11. How many integers are there between –9 and –2?

12. Calculate: 1 – 2 + 3 – 4 + 5 – 6 + 7 – 8 + 9 – 10

13. The sum of two integers is 47. If one of the integers is –24, find the other.

14. Write the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 in this order and insert ‘+’ or ‘–’ between them to get the result (a) 5 (b) –3

15. Compute each of the following:
   (a) 30 + (–25) + (–10) (b) (–20) + (–5)
   (c) 70 + (–20) + (–30) (d) –50 + (–60) + 50
   (e) 1 + (–2) + (–3) + (–4) (f) 0 + (–5) + (–2)
   (g) 0 – (–6) – (+6) (h) 0 – 2 – (–2)

16. If we denote the height of a place above sea level by a positive integer and depth below the sea level by a negative integer, write the following using integers with the appropriate signs:
   (a) 200 m above sea level    (b) 100 m below sea level
   (c) 10 m above sea level    (d) sea level

17. Write the opposite of each of the following:
(a) Decrease in size (b) Failure
(c) Profit of Rs.10 (d) 1000 A.D.
(e) Rise in water level (f) 60 km south
(g) 10 m above the danger mark of river Ganga
(h) 20 m below the danger mark of the river Brahmaputra
(i) Winning by a margin of 2000 votes
(j) Depositing Rs.100 in the Bank account
(k) 20°C rise in temperature.

18. Temperature of a place at 12:00 noon was +5°C. Temperature increased by 3°C in first hour and decreased by 1°C in the second hour. What was the temperature at 2:00 pm?

19. Write the digits 0, 1, 2, 3, ..., 9 in this order and insert ‘+’ or ‘−’ between them to get the result 3.

20. Write the integer which is its own additive inverse.

21. Write six distinct integers whose sum is 7.

22. Write the integer which is 4 more than its additive inverse.

23. Write the integer which is 2 less than its additive inverse.

24. Write two integers whose sum is less than both the integers.

25. Write two distinct integers whose sum is equal to one of the integers.

26. Using number line, how do you compare (a) two negative integers? (b) two positive integers? (c) one positive and one negative integer?

27. Observe the following : $1 + 2 – 3 + 4 + 5 – 6 – 7 + 8 – 9 = –5$

28. Change one ‘−’ sign as ‘+’ sign to get the sum 9.

29. Arrange the following integers in the ascending order : $–2, 1, 0, –3, +4, –5$

30. Arrange the following integers in the descending order : $–3, 0, –1, –4, –3, –6$

31. Write two integers whose sum is 6 and difference is also 6.

32. Write five integers which are less than $–100$ but greater than $–150$.

33. Write four pairs of integers which are at the same distance from 2 on the number line.

34. The sum of two integers is 30. If one of the integers is $–42$, then find the other.

35. Sum of two integers is $–80$. If one of the integers is $–90$, then find the other.

36. At Srinagar temperature was $–5°C$ on Monday and then it dropped by $2°C$ on Tuesday. What was the temperature of Srinagar on Tuesday? On Wednesday, it rose by $4°C$. What was the temperature on this day?

37. A plane is flying at the height of 5000 m above the sea level. At a particular point, it is exactly above a submarine floating 1200 m below the sea level. What is the vertical distance between them?
38. Mohan deposits Rs 2,000 in his bank account and withdraws Rs 1,642 from it, the next day. If withdrawal of amount from the account is represented by a negative integer, then how will you represent the amount deposited? Find the balance in Mohan’s account after the withdrawal.

39. Rita goes 20 km towards east from a point A to the point B. From B, she moves 30 km towards west along the same road. If the distance towards east is represented by a positive integer then, how will you represent the distance travelled towards west? By which integer will you represent her final position from A?

40. Write a pair of integers whose sum gives
   (a) a negative integer (b) zero
   (c) an integer smaller than both the integers.
   (d) an integer smaller than only one of the integers.
   (e) an integer greater than both the integers.

41. Write a pair of integers whose difference gives
   (a) a negative integer. (b) zero.
   (c) an integer smaller than both the integers.
   (d) an integer greater than only one of the integers.
   (e) an integer greater than both the integers.

42. Write down a pair of integers whose
   (a) sum is –3 (b) difference is –5
   (c) difference is 2 (d) sum is 0

43. Write down a pair of integers whose:
   (a) sum is –7 (b) difference is –10 (c) sum is 0

44. Write a pair of negative integers whose difference gives 8.

45. Write a negative integer and a positive integer whose sum is –5.

46. Write a negative integer and a positive integer whose difference is –3.

47. Find: 4 × (–8), 8 × (–2), 3 × (–7), 10 × (–1) using number line.

48. Verify (–30) × [13 + (–3)] = [(–30) × 13] + [(–30) × (–3)]

49. In a class test containing 15 questions, 4 marks are given for every correct answer and (–2) marks are given for every incorrect answer. (i) Gurpreet attempts all questions but only 9 of her answers are correct. What is her total score? (ii) One of her friends gets only 5 answers correct. What will be her score?

50. An elevator descends into a mine shaft at the rate of 5 metre per minute. What will be its position after one hour? If it begins to descend from 15 m above the ground, what will be its position after 45minutes?

51. A certain freezing process requires that room temperature be lowered from 40°C at the rate of 5°C every hour. What will be the room temperature 10 hours after the process begins?

52. In a test (+5) marks are given for every correct answer and (–2) marks are given for every incorrect answer. (i) Radhika answered all the questions and scored 30 marks though she got 10 correct answers. (ii) Jay also answered all the questions and scored (–12) marks though he got 4 correct answers. How many incorrect answers had they attempted?
53. A shopkeeper earns a profit of Re 1 by selling one pen and incurs a loss of 40 paise per pencil while selling pencils of her old stock. (i) In a particular month she incurs a loss of Rs 5. In this period, she sold 45 pens. How many pencils did she sell in this period? (ii) In the next month she earns neither profit nor loss. If she sold 70 pens, how many pencils did she sell?

54. The temperature at 12 noon was 10°C above zero. If it decreases at the rate of 2°C per hour until midnight, at what time would the temperature be 8°C below zero? What would be the temperature at mid-night?

55. An elevator descends into a mine shaft at the rate of 6 m/min. If the descent starts from 10 m above the ground level, how long will it take to reach – 350 m.

56. Evaluate each of the following:
   (a) \((-30) \div 10\)  (b) \(50 \div (-5)\)  (c) \((-36) \div (-9)\)
   (d) \((-49) \div (49)\)  (e) \(13 \div [(-2) + 1]\)  (f) \(0 \div (-12)\)
   (g) \((-31) \div [(-30) + (-1)]\)
   (h) \([(-36) \div 12] \div 3\)  (i) \([(-6) + 5)] \div [(-2) + 1]\)

57. Find the product, using suitable properties:
   (a) \(26 \times (-48) + (-48) \times (-36)\)
   (b) \(8 \times 53 \times (-125)\)
   (c) \(15 \times (-25) \times (-4) \times (-10)\)
   (d) \((-41) \times 102\)
   (e) \(625 \times (-35) + (-625) \times 65\)
   (f) \(7 \times (50 - 2)\)
   (g) \((-17) \times (-29)\)
   (h) \((-57) \times (-19) + 57\)

58. Verify the following:
   (a) \(18 \times [7 + (-3)] = [18 \times 7] + [18 \times (-3)]\)
   (b) \((-21) \times [(-4) + (-6)] = [(-21) \times (-4)] + [(-21) \times (-6)]\)

59. A cement company earns a profit of Rs 8 per bag of white cement sold and a loss of Rs 5 per bag of grey cement sold.
   (a) The company sells 3,000 bags of white cement and 5,000 bags of grey cement in a month. What is its profit or loss?
   (b) What is the number of white cement bags it must sell to have neither profit nor loss, if the number of grey bags sold is 6,400 bags.

60. Find each of the following products:
   (i) \((-18) \times (-10) \times 9\)
   (ii) \((-20) \times (-2) \times (-5) \times 7\)
   (iii) \((-1) \times (-5) \times (-4) \times (-6)\)
MCQ WORKSHEET-I
CLASS – VII: CHAPTER – 2
FRACTIONS AND DECIMALS

1. Which of the following fraction has numerator 5
   a) \( \frac{2}{5} \)  b) \( \frac{5}{7} \)  (c) \( \frac{5}{7} \)  (d) \( \frac{7}{5} \)

2. Which of the following fraction has denominator 8.
   a) \( \frac{3}{8} \)  b) \( 1\frac{3}{8} \)  (c) \( \frac{8}{3} \)  (d) \( \frac{3}{8} \)

3. What fraction does the shaded portion in the adjoining fig. represents.
   a) \( \frac{5}{2} \)  b) \( \frac{3}{5} \)  (c) \( \frac{2}{5} \)  (d) \( \frac{5}{3} \)

4. Which one of the following is proper fraction?
   a) \( \frac{7}{5} \)  b) \( \frac{3}{2} \)  (c) \( \frac{4}{7} \)  (d) \( \frac{4}{3} \)

5. Which one of the following is improper fraction?
   a) \( \frac{2}{3} \)  b) \( \frac{5}{7} \)  (c) \( \frac{7}{4} \)  (d) \( \frac{1}{2} \)

6. What is the value of \( \frac{2}{7} + \frac{3}{7} \)
   a) \( \frac{5}{14} \)  b) \( \frac{5}{7} \)  (c) \( \frac{6}{7} \)  (d) \( \frac{35}{14} \)

7. What is the value of \( \frac{3}{5} + \frac{2}{7} \)
   a) \( \frac{5}{12} \)  b) \( \frac{29}{35} \)  (c) \( \frac{31}{35} \)  (d) \( \frac{5}{35} \)

8. What is the value of \( \frac{2}{3} + \frac{1}{3} + \frac{7}{3} \)
   a) \( \frac{10}{3} \)  b) \( \frac{10}{9} \)  (c) \( \frac{30}{3} \)  (d) \( \frac{10}{27} \)

9. What is the value of \( \frac{2}{3} + \frac{1}{3} + \frac{7}{3} \)
   a) \( \frac{10}{3} \)  b) \( \frac{10}{9} \)  (c) \( \frac{30}{3} \)  (d) \( \frac{10}{27} \)

10. What is the value of \( \frac{5}{8} - \frac{3}{8} \)
    a) \( \frac{37}{16} \)  b) \( \frac{1}{8} \)  (c) \( \frac{2}{8} \)  (d) \( \frac{43}{8} \)
MCQ WORKSHEET-II
CLASS – VII: CHAPTER – 2
FRACTIONS AND DECIMALS

1. What is the value of $\frac{4}{5} - \frac{2}{3}$
   a) $\frac{2}{2}$  
   b) $\frac{14}{15}$  
   c) $\frac{2}{3}$  
   d) none of these

2. Which of the following drawing shows $2 \times \frac{1}{5}$
   a)  
   b)  
   c)  
   d)  

3. Which of the following drawing shows $3 \times \frac{3}{4} = 2 \frac{1}{4}$
   a)  
   b)  
   c)  
   d) None of these

4. The value of $\frac{1}{2}$ of 24 is
   a) 12  
   b) $\frac{1}{12}$  
   c) 48  
   d) $\frac{1}{48}$

5. The product of $\frac{3}{4}$ and $\frac{1}{5}$ gives
   a) $\frac{3}{20}$  
   b) $\frac{5}{12}$  
   c) $\frac{12}{5}$  
   d) $\frac{20}{3}$

6. Which of the following product gives the value $\frac{78}{5}$
   a) $3 \times \frac{5}{5}$  
   b) $\frac{1}{3}$  
   c) $3 \times \frac{5}{26}$  
   d) None of these

7. The product of $\frac{2}{5} \times 5 \frac{1}{4}$ gives
   a) $\frac{1}{2}$  
   b) $\frac{21}{10}$  
   c) $\frac{11}{10}$  
   d) $\frac{15}{10}$

8. The reciprocal of $1 \frac{2}{3}$ is
   a) $\frac{3}{2}$  
   b) $1 \frac{3}{2}$  
   c) $\frac{5}{3}$  
   d) $\frac{3}{5}$

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9. The value of $\frac{3}{4}$ of 12 is
   (a) 16    (b) 1    (c) 9    (d) $\frac{1}{16}$

10. The value of $3\frac{1}{2}$ of $\frac{8}{3}$ is
    (a) 4    (b) $\frac{28}{3}$    (c) $\frac{9}{4}$    (d) $\frac{21}{16}$

11. The value of $4\frac{1}{3}$ of 3 is
    (a) 4    (b) 13    (c) $\frac{13}{9}$    (d) $\frac{9}{13}$

12. Which of the following is the least form of $\frac{18}{36}$
    (a) $\frac{3}{6}$    (b) $\frac{9}{18}$    (c) $\frac{1}{2}$    (d) $\frac{2}{1}$

13. What is the sum of 5.300 and 3.250
    (a) 8.550    (b) 85.50    (c) 5.6250    (d) 8550

14. What is the value of 29.35 $-$ 04.56
    (a) 23.75    (b) 16.35    (c) 16.25    (d) 24.79

15. Which one of the following is greater
    (a) 5.0    (b) 0.5    (c) 0.005    (d) 0.05
MCQ WORKSHEET-III
CLASS – VII: CHAPTER – 2
FRACTIONS AND DECIMALS

1. Which one of the following is smaller
   (a) 2.031       (b) 2.301       (c) 0.2301       (d) 23.01

2. 7 Rupees 7 paisa can be written in rupees as
   (a) Rs7.07       (b) Rs7.70       (c) Rs0.707       (d) Rs 770

3. 5 cm in Km can be written as
   (a) 0.0005       (b) 0.00005      (c) 0.0005       (d) 0.05

4. The place value of 2 in 21.38 is
   (a) Ones       (b) Tens         (c) Tenth        (d) Hundredth

5. Which one of the following represent the expansion
   \[2 \times 10 + 0 \times 1 + 0 \times \frac{1}{10} + 3 \times \frac{1}{100}\]
   (a) 20.03       (b) 2.03        (c) 200.03       (d) 2.034

6. The value of 2.71 is
   (a) 135.5       (b) 1355        (c) 13.55        (d) 1.355

7. The product of 153.7 and 10 is
   (a) 1.537       (b) 15.37       (c) 153.7        (d) 1537

8. The value of 43.07 is
   (a) 4.307       (b) 4307        (c) 43.07        (d) 430.7

9. The value of 0.03 is
   (a) 0.0003      (b) 3           (c) 0.003       (d) 30

10. The value of 1.3 is
    (a) 16          (b) 0.16       (c) \frac{1}{16}    (d) 1.6

11. The value of 0.80 is
    (a) 52.5        (b) 0.525      (c) 525          (d) 5250

12. The value of 0.78 is
    (a) 7800        (b) 0.0078     (c) 0.78         (d) 7.8

13. The value of 26.3 is
    (a) 0.0263      (b) 0.2630     (c) 26300        (d) 26.300

14. The value of 7.75 is
    (a) 31          (b) 0.0031     (c) 0.31         (d) 3.1

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1. Fill in the blanks:
   (a) \( \frac{11}{16}, \frac{14}{15} \)
   (b) \( \frac{8}{15}, \frac{95}{14} \)
   (c) \( \frac{12}{75}, \frac{32}{200} \)

2. Ali divided one fruit cake equally among six persons. What part of the cake he gave to each person?

3. Express \( \frac{11}{20} \) as a decimal.

4. Express \( 6 \frac{2}{3} \) as an improper fraction.

5. Express \( 3 \frac{2}{5} \) as a decimal.

6. Express 0.041 as a fraction.

7. Express 6.03 as a mixed fraction.

8. Arrange the fractions \( \frac{2}{3}, \frac{3}{4}, \frac{1}{2}, \frac{5}{6} \) in ascending order.

9. Arrange the fractions \( \frac{6}{7}, \frac{7}{8}, \frac{4}{5}, \frac{3}{4} \) in descending order.

10. Write \( \frac{3}{4} \) as a fraction with denominator 44

11. Write \( \frac{5}{6} \) as a fraction with numerator 60

12. Write \( \frac{129}{8} \) as a mixed fraction.

13. Add the fractions \( \frac{3}{8} \) and \( \frac{2}{3} \).

14. Add the fractions \( \frac{3}{8} \) and \( 6 \frac{3}{4} \).
15. Subtract \( \frac{1}{6} \) from \( \frac{1}{2} \).

16. Subtract \( \frac{8}{3} \) from \( \frac{100}{9} \).

17. Subtract \( \frac{1}{4} \) from \( 6\frac{1}{2} \).

18. Add \( \frac{1}{4} \) and \( 6\frac{1}{2} \).

19. Katrina rode her bicycle \( 6\frac{1}{2} \) km in the morning and \( \frac{3}{4} \) km in the evening. Find the distance travelled by her altogether on that day.

20. A rectangle is divided into certain number of equal parts. If 16 of the parts so formed represent the fraction \( \frac{1}{4} \), find the number of parts in which the rectangle has been divided.

21. Grip size of a tennis racquet is \( 11\frac{9}{80} \) cm. Express the size as an improper fraction.

22. Mr. Rajan got a job at the age of 24 years and he got retired from the job at the age of 60 years. What fraction of his age till retirement was he in the job?

23. On an average \( \frac{1}{10} \) of the food eaten is turned into organism’s own body and is available for the next level of consumer in a food chain. What fraction of the food eaten is not available for the next level?

24. The food we eat remains in the stomach for a maximum of 4 hours. For what fraction of a day, does it remain there?

25. It was estimated that because of people switching to Metro trains, about 33000 tonnes of CNG, 3300 tonnes of diesel and 21000 tonnes of petrol was saved by the end of year 2007. Find the fraction of : (i) the quantity of diesel saved to the quantity of petrol saved. (ii) the quantity of diesel saved to the quantity of CNG saved.

26. A cup is \( \frac{1}{3} \) full of milk. What part of the cup is still to be filled by milk to make it full?

27. Mary bought \( 3\frac{1}{2} \) m of lace. She used \( 1\frac{3}{4} \) m of lace for her new dress. How much lace is left with her?

28. Sunil purchased \( 12\frac{1}{2} \) litres of juice on Monday and \( 14\frac{3}{4} \) litres of juice on Tuesday. How many litres of juice did he purchase together in two days?
29. When Sunita weighed herself on Monday, she found that she had gained $\frac{1}{4}$ kg. Earlier her weight was $\frac{46}{8}$ kg. What was her weight on Monday?

30. Nazima gave $2\frac{3}{4}$ litres out of the $5\frac{1}{2}$ litres of juice she purchased to her friends. How many litres of juice is left with her?

31. Roma gave a wooden board of length $150\frac{1}{4}$ cm to a carpenter for making a shelf. The carpenter sawed off a piece of $40\frac{1}{5}$ cm from it. What is the length of the remaining piece?

32. Nasir travelled $3\frac{1}{2}$ km in a bus and then walked $1\frac{1}{8}$ km to reach a town. How much did he travel to reach the town?

33. The fish caught by Neetu was of weight $3\frac{3}{4}$ kg and the fish caught by Narendra was of weight $2\frac{1}{2}$ kg. How much more did Neetu’s fish weigh than that of Narendra?

34. Neelam’s father needs $1\frac{3}{4}$ m of cloth for the skirt of Neelam’s new dress and $\frac{1}{2}$ m for the scarf. How much cloth must he buy in all?

35. Write a pair of fractions whose sum is $\frac{7}{11}$ and the difference is $\frac{2}{11}$.

36. Simplify: $\frac{5}{6} + \frac{3}{4} + \frac{1}{2}$

37. Simplify: $\frac{5}{8} + \frac{2}{5} + \frac{3}{4}$

38. Simplify: $\frac{3}{10} + \frac{7}{15} + \frac{3}{5}$

39. Simplify: $\frac{4}{3} + \frac{3}{4} + \frac{1}{2}$

40. Simplify: $\frac{7}{3} + \frac{3}{4} + \frac{5}{6}$
41. Simplify: \( \frac{2}{3} + \frac{1}{2} + 5 \frac{1}{6} \)

42. Simplify: \( \frac{2}{3} - \frac{1}{2} + 5 \frac{1}{6} \)

43. Simplify: \( \frac{7}{3} + \frac{2}{3} - 5 \frac{1}{6} \)

44. If \( \frac{5}{8} = \frac{20}{p} \), then find the value of p.

45. Arrange in descending order: \( 8 \frac{8}{17}, 8 \frac{8}{5}, 8 \frac{8}{9}, 13 \)

46. Arrange in descending order: \( \frac{5}{9}, \frac{3}{12}, \frac{1}{3}, \frac{4}{15} \)

47. Arrange in descending order: \( \frac{2}{7}, \frac{11}{35}, \frac{9}{14}, \frac{13}{28} \)

48. Arrange in ascending order: \( \frac{2}{5}, \frac{3}{4}, \frac{1}{2}, \frac{3}{5} \)

49. Arrange in ascending order: \( \frac{4}{6}, \frac{3}{8}, \frac{6}{12}, \frac{5}{16} \)

50. Arrange in ascending order: \( \frac{5}{6}, \frac{3}{8}, \frac{6}{12}, \frac{1}{3}, \frac{6}{8} \)

51. Ramesh solved \( \frac{2}{7} \) part of an exercise while Seema solved \( \frac{4}{5} \) of it. Who solved lesser part?

52. Sameera purchased \( 3 \frac{1}{2} \) kg apples and \( 4 \frac{3}{4} \) kg oranges. What is the total weight of fruits purchased by her?

53. Suman studies for \( 5 \frac{2}{3} \) hours daily. She devotes \( 2 \frac{4}{5} \) hours of her time for Science and Mathematics. How much time does she devote for other subjects?

54. Arrange the following in descending order:

55. A rectangular sheet of paper is \( 12 \frac{1}{2} \) cm long and \( 10 \frac{2}{3} \) cm wide. Find its perimeter.

56. Find the perimeters of (i) \( \triangle ABE \) (ii) the rectangle \( BCDE \) in this figure. Whose perimeter is greater?
57. Ritu ate $\frac{4}{5}$ part of an apple and the remaining apple was eaten by her brother Somu. How much part of the apple did Somu eat? Who had the larger share? By how much?

58. Michael finished colouring a picture in $\frac{7}{12}$ hour. Vaibhav finished colouring the same picture in $\frac{3}{4}$ hour. Who worked longer? By what fraction was it longer?

59. Represent pictorially: $2 \times \frac{2}{5} = \frac{4}{5}$

60. In a class of 40 students $\frac{1}{5}$ of the total number of students like to study English, $\frac{2}{5}$ of the total number like to study mathematics and the remaining students like to study Science.
   (i) How many students like to study English?
   (ii) How many students like to study Mathematics?
   (iii) What fraction of the total number of students like to study Science?

61. Find $\frac{1}{2}$ of (i) 24 (ii) 46

62. Find $\frac{3}{4}$ of (i) 16 (ii) 36

63. Multiply and express as a mixed fraction:
   (a) $3 \times 5 \frac{1}{5}$  
   (b) $5 \times 6 \frac{3}{4}$  
   (c) $3 \frac{1}{4} \times 6$  
   (d) $3 \frac{2}{5} \times 8$

64. Find $\frac{1}{2}$ of 
   (i) $2 \frac{3}{4}$  
   (ii) $4 \frac{2}{9}$

65. Find $\frac{5}{8}$ of (i) $3 \frac{5}{6}$  
   (ii) $9 \frac{2}{3}$

66. Sushant reads $\frac{1}{3}$ part of a book in 1 hour. How much part of the book will he read in $2\frac{1}{5}$ hours?

67. Vidya and Pratap went for a picnic. Their mother gave them a water bag that contained 5 litres of water. Vidya consumed $\frac{2}{5}$ of the water. Pratap consumed the remaining water.
   (i) How much water did Vidya drink?
   (ii) What fraction of the total quantity of water did Pratap drink?

68. Saili plants 4 saplings, in a row, in her garden. The distance between two adjacent saplings is $\frac{3}{4}$ m. Find the distance between the first and the last sapling.
69. Lipika reads a book for \(1 \frac{3}{4}\) hours every day. She reads the entire book in 6 days. How many hours in all were required by her to read the book?

70. A car runs 16 km using 1 litre of petrol. How much distance will it cover using \(2 \frac{3}{4}\) litres of petrol.

71. Find: (i) \(\frac{2}{5} + \frac{1}{2}\) (ii) \(2 \frac{1}{2} \div \frac{3}{5}\) (iii) \(3 \frac{1}{5} + \frac{1}{3}\) (iv) \(2 \frac{1}{5} \div 1 \frac{1}{5}\)

72. Express in kg:
   (i) 200 g (ii) 3470 g (iii) 4 kg 8 g (iv) 2598 mg

73. Write the following decimal numbers in the expanded form:
   (i) 20.03 (ii) 2.03 (iii) 200.03 (iv) 2.034

74. Write the place value of 2 in the following decimal numbers:
   (i) 2.56 (ii) 21.37 (iii) 10.25 (iv) 9.42 (v) 63.352.

75. Express as rupees using decimals.
   (a) 5 paisa (b) 350 paisa (c) 2 rupees 60 paisa (d) 5 rupees 9 paisa

76. Express as metres using decimals.
   (a) 15 cm (b) 8 cm (c) 2 m 15 cm (d) 3 m 70 cm

77. Express as cm using decimals.
   (a) 25 mm (b) 5 mm (c) 176 mm (d) 4 cm 5 mm

78. Express as km using decimals.
   (a) 6 m (b) 55 m (c) 4545 m (d) 6 km 50 m

79. Express as kg using decimals.
   (a) 8 g (b) 160 g (c) 7550 g (d) 6 kg 80 g (e) 5 kg 20 g

80. Express each of the following without using decimals:
   (a) Rs. 5.25 (b) 8.354 g (c) 3.5 cm (d) 3.05 km
   (e) 7.54 m (f) 15.005 kg (g) 12.05 m (h) 0.2 m

81. Shyama bought 5 kg 300 g apples and 3 kg 250 g mangoes. Sarala bought 4 kg 800 g oranges and 4 kg 150 g bananas. Who bought more fruits?

82. How much less is 28 km than 42.6 km?

83. The side of an equilateral triangle is 3.5 cm. Find its perimeter.

84. The length of a rectangle is 7.1 cm and its breadth is 2.5 cm. What is the area of the rectangle?

85. A two-wheeler covers a distance of 55.3 km in one litre of petrol. How much distance will it cover in 10 litres of petrol?

86. Find the area of rectangle whose length is 5.7 cm and breadth is 3 cm.

87. Find the average of 4.2, 3.8 and 7.6.
88. Each side of a regular polygon is 2.5 cm in length. The perimeter of the polygon is 12.5 cm. How many sides does the polygon have?

89. A car covers a distance of 89.1 km in 2.2 hours. What is the average distance covered by it in 1 hour?

90. Convert 2009 paise to rupees and express the result as a mixed fraction.

91. Convert 1537 cm to m and express the result as an improper fraction.

92. Convert 2435 m to km and express the result as mixed fraction.

93. Express 0.041 as a fraction.

94. A vehicle covers a distance of 43.2 km in 2.4 litres of petrol. How much distance will it cover in one litre of petrol?

95. Find:
   (i) $7 \div 3.5$ (ii) $36 \div 0.2$ (iii) $3.25 \div 0.5$ (iv) $30.94 \div 0.7$ (v) $0.5 \div 0.25$
   (vi) $7.75 \div 0.25$ (vii) $76.5 \div 0.15$ (viii) $37.8 \div 1.4$ (ix) $2.73 \div 1.3$

96. Find:
   (i) $7.9 \div 1000$ (ii) $26.3 \div 1000$ (iii) $38.53 \div 1000$
   (iv) $128.9 \div 1000$ (v) $0.5 \div 1000$

97. Find:
   (i) $0.4 \div 2$ (ii) $0.35 \div 5$ (iii) $2.48 \div 4$ (iv) $65.4 \div 6$
   (v) $651.2 \div 4$ (vi) $14.49 \div 7$ (vii) $3.96 \div 4$ (viii) $0.80 \div 5$

98. Find:
   (i) $7.75 \div 0.25$ (ii) $42.8 \div 0.02$ (iii) $5.6 \div 1.4$

99. Find:
   (i) $15.5 \div 5$ (ii) $126.35 \div 7$

100. Find:
    (i) $2.5 \times 0.3$ (ii) $0.1 \times 51.7$ (iii) $0.2 \times 316.8$ (iv) $1.3 \times 3.1$
     (v) $0.5 \times 0.05$ (vi) $11.2 \times 0.15$ (vii) $1.07 \times 0.02$
     (viii) $10.05 \times 1.05$ (ix) $101.01 \times 0.01$ (x) $100.01 \times 1.1$
MCQ WORKSHEET-I

CLASS – VII: CHAPTER – 3

DATA HANDLINGS

1. The mean of the first five whole number is _______.
   a. 2  b. 5  c. 3  d. 4

2. The mean of the first five natural number is _______.
   a. 2  b. 5  c. 3  d. 4

3. The mean of the first seven natural number is _______.
   a. 2  b. 5  c. 3  d. 4

4. The median of the first ten natural number is _______.
   a. 2.5  b. 5.5  c. 3.5  d. 4.5

5. The median of the first ten prime number is _______.
   a. 2.5  b. 5.5  c. 3.5  d. none of these

6. A cricketer scores the following runs in eight innings:
   58, 76, 40, 35, 46, 45, 0, 100
   What will be their mean score?
   a. 400  b. 50  c. 200  d. 100

7. What will be the range of following data?
   32, 41, 28, 54, 35, 26, 33, 23, 38, 40
   a. 25  b. 23  c. 31  d. 54

8. The tally mark shows frequency _______.
   a. 4  b. 5  c. 0  d. 3

9. Which observation in the following data has maximum frequency?
   1, 1, 2, 4, 3, 2, 1, 2, 2, 4
   a. 4  b. 3  c. 1  d. 2

10. The tally mark shows frequency _______.
    a. 15  b. 13  c. 12  d. none of these

11. The mode of the data 2, 2, 2, 3, 3, 4, 5, 5, 5, 6, 6, 8 is _______.
    a. 2  b. 5  c. 8  d. 2 & 5 both

12. A data can have _______ mode.
    a. Only one  b. only two  c. only 3  d. more than one

Prepared by: M. S. KumarSwamy, TGT(Maths)
1. Median of the data 13,16,12,14,19,12,14,13,14 is _____.
   a. 14        b. 19        c. 12        d. 13

2. Mode and median of the data 13,16,12,14,19,12,14,13,14 are:
   a. 13 & 14    b. 14 & 13    c. 14 & 14    d. 19 & 13

3. How many books were sold in 1989?
   (a) 100       b. 200       c. 300       d. 600

4. In which year were 400 books sold?

5. In which year were fewer than 200 books sold?

6. What will be the difference of number of books sold in 1993 and 1990?
   a. 600        b. 200       c. 400       d. 100

7. How many books were sold from 1989 to 1991?
   a. 600        b. 900       c. 400       d. 800

8. How many books were sold from 1991 to 1993?
   a. 1300       b. 1000      c. 900       d. 800

9. There are 6 marbles in a box with number 1 to 6 marked on each of them. What is the probability of drawing a marble with number 2?
   a. $\frac{1}{6}$   b. $\frac{1}{5}$   c. $\frac{1}{3}$   d. 1

10. A coin is flipped to decide which team starts the game. What is the probability of your team will start?
    a. $\frac{1}{4}$   b. $\frac{1}{2}$   c. 1   d. 0
MCQ WORKSHEET-III
CLASS – VII: CHAPTER – 3
DATA HANDLINGS

1. A die is thrown once. What will be the probability of getting a prime number?
   a. \(\frac{1}{2}\)  
   b. 0  
   c. 1  
   d. \(\frac{1}{6}\)

2. Median of the data 9,8,1,2,3,6,7,5,4 is ----
   a. 5  
   b. 9  
   c. 6  
   d. 4

3. Ashish studies for 4 hours, 5 hours and 3 hours respectively on three consecutive days. How many hours does he study daily on an average?
   a. 5  
   b. 9  
   c. 6  
   d. 4

4. A batsman scored the following number of runs in six innings: 36, 35, 50, 46, 60, 55 Find the mean runs scored by him in an inning.
   a. 50  
   b. 49  
   c. 46  
   d. 47

5. The mean of the first five odd natural number is _______.
   a. 2  
   b. 5  
   c. 3  
   d. 4

6. The mean of the first ten odd natural number is _______.
   a. 12  
   b. 15  
   c. 10  
   d. 11

7. The mean of the first ten even natural number is _______.
   a. 12  
   b. 15  
   c. 10  
   d. 11

8. The median of the first ten even natural number is _______.
   a. 12  
   b. 15  
   c. 10  
   d. 11

9. The mean of the first ten prime number is _______.
   a. 12.5  
   b. 12.9  
   c. 12.8  
   d. 14.5

10. Find the mode of the given set of numbers: 1, 1, 2, 4, 3, 2, 1, 2, 2, 4
    a. 2  
    b. 1  
    c. 3  
    d. 4

11. The mode of the given set of numbers 2, 14, 16, 12, 14, 14, 16, 14, 10, 14, 18, 14 is
    a. 12  
    b. 14  
    c. 16  
    d. 11

12. Find the mode of the following data:
    12, 14, 12, 16, 15, 13, 14, 18, 19, 12, 14, 15, 16, 15, 16, 16, 15, 17, 13, 16, 15, 13, 15, 17, 15, 14, 15, 13, 15, 14
    a. 12  
    b. 14  
    c. 16  
    d. none of these

Prepared by: M. S. KumarSwamy, TGT(Maths)
PRACTICE QUESTIONS
CLASS – VII: CHAPTER – 3
DATA HANDLINGS

1. A batsman scored the following number of runs in six innings:
   36, 35, 50, 46, 60, 55
   Calculate the mean runs scored by him in an inning.

2. Ashish studies for 4 hours, 5 hours and 3 hours respectively on three consecutive days. How many hours does he study daily on an average?

3. Find the mean of first five natural numbers.

4. Find the mean of first six odd natural numbers.

5. Find the mean of first seven even natural numbers.

6. Find the mean of first five prime numbers.

7. Find the mean of first six multiples of 5.

8. Find the median of first 15 odd numbers.

9. Find the median of first 10 even numbers.

10. Find the median of first 50 whole numbers.

11. Find the median of 3, 11, 7, 2, 5, 9, 9, 2, 10.

12. Find the median of 9, 25, 18, 15, 6, 16, 8, 22, 21.

13. The ages in years of 10 teachers of a school are:
   32, 41, 28, 54, 35, 26, 23, 33, 38, 40
   (i) What is the age of the oldest teacher and that of the youngest teacher?
   (ii) What is the range of the ages of the teachers?
   (iii) What is the mean age of these teachers?

14. A cricketer scores the following runs in eight innings: 58, 76, 40, 35, 46, 45, 0, 100.
    Find the mean score.

15. The marks (out of 100) obtained by a group of students in a science test are
   85, 76, 90, 85, 39, 48, 56, 95, 81 and 75.
   Find the: (i) Highest and the lowest marks obtained by the students.
   (ii) Range of the marks obtained.
   (iii) Mean marks obtained by the group.

16. The enrolment in a school during six consecutive years was as follows:
    1555, 1670, 1750, 2013, 2540, 2820
    Find the mean enrolment of the school for this period.

17. The heights of 10 girls were measured in cm and the results are as follows:
    135, 150, 139, 128, 151, 132, 146, 149, 143, 141.
    (i) What is the height of the tallest girl? (ii) What is the height of the shortest girl?
    (iii) What is the range of the data? (iv) What is the mean height of the girls?
    (v) How many girls have heights more than the mean height.

18. Following are the margins of victory in the football matches of a league.
    1, 3, 2, 5, 1, 4, 6, 2, 5, 2, 2, 2, 4, 1, 2, 3, 1, 1, 2, 3, 2, 6, 4, 3, 2, 1, 1, 4, 2, 1, 5, 3, 3, 2, 3, 2, 4, 2, 1, 2
    Find the mode of this data.
19. Find the mode of 2, 6, 5, 3, 0, 3, 4, 3, 2, 4, 5, 2, 4
20. Find the mode of the numbers: 2, 2, 2, 3, 3, 4, 5, 5, 6, 6, 8
21. Find the mode of the following data:
   12, 14, 12, 16, 15, 13, 14, 18, 19, 12, 14, 15, 16, 15, 16, 15,
   17, 13, 16, 16, 15, 15, 13, 15, 17, 15, 14, 15, 13, 14
22. Heights (in cm) of 25 children are given below:
   168, 165, 163, 160, 163, 161, 162, 164, 163, 162, 164, 163, 160, 163, 165, 163,
   162, 163, 164, 163, 160, 165, 163, 162
   What is the mode of their heights? What do we understand by Mode here?
23. Find the median of the data: 24, 36, 46, 17, 18
24. The scores in mathematics test (out of 25) of 15 students is as follows:
   19, 25, 23, 20, 9, 20, 15, 10, 5, 16, 25, 20, 24, 12, 20
   Find the mode and median of this data. Are they same?
25. The runs scored in a cricket match by 11 players is as follows:
   6, 15, 120, 50, 100, 80, 10, 15, 8, 10, 15
   Find the mean, mode and median of this data. Are the three same?
26. The weights (in kg.) of 15 students of a class are:
   38, 42, 35, 37, 45, 50, 32, 43, 43, 40, 36, 38, 43, 38, 47
   (i) Find the mode and median of this data.
   (ii) Is there more than one mode?
27. Find the mode and median of the data: 13, 16, 12, 14, 19, 12, 14, 13, 14
28. Two hundred students of 6th and 7th class were asked to name their favourite colour so as to
decide upon what should be the colour of their School Building. The results are shown in the
following table. Represent the given data on a bar graph.

<table>
<thead>
<tr>
<th>Favourite Colour</th>
<th>Red</th>
<th>Green</th>
<th>White</th>
<th>Yellow</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Students</td>
<td>43</td>
<td>19</td>
<td>55</td>
<td>49</td>
<td>34</td>
</tr>
</tbody>
</table>

Answer the following questions with the help of the bar graph:
(i) Which is the most preferred colour and which is the least preferred?
(ii) How many colours are there in all? What are they?
29. Following data gives total marks (out of 600) obtained by six children of a particular class.
Represent the data on a bar graph.

<table>
<thead>
<tr>
<th>Students</th>
<th>Ajay</th>
<th>Bali</th>
<th>Dipti</th>
<th>Geetika</th>
<th>Hari</th>
<th>Faiyaz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marks Obtained</td>
<td>450</td>
<td>500</td>
<td>300</td>
<td>360</td>
<td>400</td>
<td>540</td>
</tr>
</tbody>
</table>
30. A mathematics teacher wants to see, whether the new technique of teaching she applied after
quarterly test was effective or not. She takes the scores of the 5 weakest children in the quarterly
test (out of 25) and in the half yearly test (out of 25):

<table>
<thead>
<tr>
<th>Students</th>
<th>Ashish</th>
<th>Kavish</th>
<th>Mohan</th>
<th>Arun</th>
<th>Uday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarterly</td>
<td>10</td>
<td>15</td>
<td>12</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Half Yearly</td>
<td>15</td>
<td>18</td>
<td>16</td>
<td>15</td>
<td>21</td>
</tr>
</tbody>
</table>
31. There are 6 marbles in a box with numbers from 1 to 6 marked on each of them.
   (i) What is the probability of drawing a marble with number 2?
   (ii) What is the probability of drawing a marble with number 5?
32. When a die is thrown, list the outcomes of an event of getting (i) (a) a prime number (b) not a
   prime number. (ii) (a) a number greater than 5 (b) a number not greater than 5.
1. Write the statements “The sum of three times $x$ and 11 is 32” in the form of equations:
   (a) $6x - 5$  
   (b) $3x + 11$  
   (c) $11x + 3$  
   (d) $3x$

2. Write the statements “If you subtract 5 from 6 times a number, you get 7.” in the form of equations:
   (a) $6x - 5 = 7$  
   (b) $5x - 6 = 7$  
   (c) $x - 5 = 7$  
   (d) $x - 6 = 7$

3. Write the statements “One fourth of $m$ is 3 more than 7” in the form of equations:
   (a) $\frac{1}{4}m - 7 = 3$  
   (b) $m - 4 = 3$  
   (c) $\frac{1}{4}m - 7 = 3$  
   (d) $\frac{1}{4}m - 3 = 7$

4. Write the statements “One third of a number plus 5 is 8” in the form of equations:
   (a) $3m + 5 = 8$  
   (b) $m + 5 = 8$  
   (c) $\frac{1}{3}m + 5 = 8$  
   (d) $\frac{1}{3}m + 8 = 5$

5. Which is a solution of the equation $2x = 12$:
   (a) $x = 2$  
   (b) $x = 3$  
   (c) $x = 4$  
   (d) $x = 6$

6. Which is a solution of the equation $x + 4 = 6$:
   (a) $x = 2$  
   (b) $x = 3$  
   (c) $x = 4$  
   (d) $x = 6$

7. Which is a solution of the equation $7x + 5 = 19$:
   (a) $x = 2$  
   (b) $x = 3$  
   (c) $x = 4$  
   (d) $x = 6$

8. Which is a solution of the equation $4x - 3 = 13$:
   (a) $x = 2$  
   (b) $x = 3$  
   (c) $x = 4$  
   (d) $x = 6$

9. Which is a solution of the equation $5x + 2 = 17$:
   (a) $x = 2$  
   (b) $x = 3$  
   (c) $x = 4$  
   (d) $x = 6$

10. Which is a solution of the equation $3x - 14 = 4$:
    (a) $x = 2$  
    (b) $x = 3$  
    (c) $x = 4$  
    (d) $x = 6$

11. Write the statements “The sum of numbers $x$ and 4 is 9” in the form of equations:
    (a) $x - 4 = 9$  
    (b) $x + 4 = 9$  
    (c) $x + 9 = 4$  
    (d) none of these

12. Write the statements “2 subtracted from a number is 8” in the form of equations:
    (a) $x - 8 = 2$  
    (b) $x - 2 = 8$  
    (c) $x + 2 = 8$  
    (d) none of these

13. Write the statements “Seven times a number plus 7 gets you 77” in the form of equations:
    (a) $7x - 7 = 77$  
    (b) $7x + 7 = 77$  
    (c) $x + 7 = 77$  
    (d) none of these

14. Write the statements “If you take away 6 from 6 times a number, you get 60” in the form of equations:
    (a) $6x + 6 = 60$  
    (b) $6x - 6 = 60$  
    (c) $x - 6 = 60$  
    (d) none of these

15. Write the statements “If you add 3 to one-third of a number, you get 30” in the form of equations:
    (a) $x + 3 = 30$  
    (b) $\frac{1}{3}x + 3 = 30$  
    (c) $x + \frac{1}{3} = 30$  
    (d) none of these
MCQ WORKSHEET-II
CLASS – VII: CHAPTER – 4
SIMPLE EQUATIONS

1. The solution of the equation \( p + 4 = 15 \) is \( p = \)
   (a) 12  (b) 13  (c) 14  (d) 11

2. The solution of the equation \( m – 7 = 3 \) is \( m = \)
   (a) 10  (b) 13  (c) 12  (d) 11

3. The solution of the equation \( 2m = 7 \) is \( m = \)
   (a) 12  (b) 13  (c) 14  (d) none of these

4. The solution of the equation \( \frac{m}{5} = 3 \) is \( m = \)
   (a) 12  (b) 13  (c) 15  (d) none of these

5. The solution of the equation \( \frac{3m}{5} = 6 \) is \( m = \)
   (a) 12  (b) 11  (c) 10  (d) none of these

6. The solution of the equation \( \frac{p}{2} + 2 = 8 \) is \( p = \)
   (a) 12  (b) 13  (c) 14  (d) 11

7. The solution of the equation \( 3p + 4 = 25 \) is \( p = \)
   (a) 5  (b) 6  (c) 4  (d) 7

8. The solution of the equation \( 4p – 2 = 18 \) is \( p = \)
   (a) 5  (b) 6  (c) 4  (d) 7

9. The solution of the equation \( 3n + 7 = 25 \) is \( n = \)
   (a) 12  (b) 11  (c) 10  (d) none of these

10. The solution of the equation \( 2p – 1 = 23 \) is \( p = \)
    (a) 12  (b) 11  (c) 10  (d) none of these

11. The solution of the equation \( \frac{20p}{3} = 40 \) is \( p = \)
    (a) 5  (b) 6  (c) 4  (d) 7

12. The solution of the equation \( \frac{3p}{10} = 6 \) is \( p = \)
    (a) 10  (b) 20  (c) 30  (d) none of these
MCQ WORKSHEET-III  
CLASS – VII: CHAPTER – 4  
SIMPLE EQUATIONS

1. The solution of the equation $3n - 2 = 46$ is $n = $.
   (a) 12    (b) 11    (c) 16    (d) none of these

2. The solution of the equation $5m + 7 = 17$ is $m = $.
   (a) 2    (b) 3    (c) 4    (d) none of these

3. The sum of three times a number and 11 is 32. Find the number.
   (a) 6    (b) 7    (c) 8    (d) none of these

4. Find a number, such that one fourth of the number is 3 more than 7.
   (a) 40    (b) 20    (c) 30    (d) none of these

5. Raju’s father’s age is 5 years more than three times Raju’s age. Find Raju’s age, if his father is 44 years old.
   (a) 12    (b) 13    (c) 15    (d) none of these

6. What is that number one third of which added to 5 gives 8?
   (a) 11    (b) 10    (c) 9    (d) none of these

7. Find a number such that on adding 4 to eight times of it; you get 60.
   (a) 6    (b) 7    (c) 8    (d) none of these

8. Find a number such that one fifth of it minus 4 gives 3.
   (a) 45    (b) 25    (c) 35    (d) none of these

9. The solution of the equation $12p - 5 = 25$ is $p = $.
   (a) $\frac{30}{12}$    (b) $\frac{20}{12}$    (c) 10    (d) none of these

10. The solution of the equation $4(m + 3) = 18$ is $m = $.
    (a) $\frac{6}{4}$    (b) 3    (c) $\frac{30}{4}$    (d) none of these

11. The solution of the equation $34 - 5(p - 1) = 4$ is $p = $.
    (a) 5    (b) 6    (c) 4    (d) 7

12. Nine added to thrice a number a whole number gives 45. Find the number.
    (a) 12    (b) 13    (c) 15    (d) none of these

13. Four-fifths of a number is greater than three-fourths of the number by 4. Find the number.
    (a) 40    (b) 60    (c) 80    (d) none of these

14. Twice a number when decreased by 7 gives 45. Find the number.
    (a) 26    (b) 23    (c) 25    (d) none of these

15. Thrice a number when increased by 5 gives 44. Find the number.
    (a) 12    (b) 13    (c) 15    (d) none of these
1. Write the following statements in the form of equations:
   (i) The sum of three times \(x\) and 11 is 32.
   (ii) If you subtract 5 from 6 times a number, you get 7.
   (iii) One fourth of \(m\) is 3 more than 7.
   (iv) One third of a number plus 5 is 8.

2. Convert the following equations in statement form:
   (i) \( x - 5 = 9 \)
   (ii) \( 5p = 20 \)
   (iii) \( 3n + 7 = 1 \)
   (iv) \( \frac{m}{5} - 2 = 6 \).

3. Write the following situation in the form of equations:
   Raju’s father’s age is 5 years more than three times Raju’s age. Raju’s father is 44 years old. Set up an equation to find Raju’s age.

4. A shopkeeper sells mangoes in two types of boxes, one small and one large. A large box contains as many as 8 small boxes plus 4 loose mangoes. Set up an equation which gives the number of mangoes in each small box. The number of mangoes in a large box is given to be 100.

5. Write equations for the following statements:
   (i) The sum of numbers \(x\) and 4 is 9.
   (ii) The difference between \(y\) and 2 is 8.
   (iii) Ten times \(a\) is 70.
   (iv) The number \(b\) divided by 5 gives 6.
   (v) Three fourth of \(t\) is 15.
   (vi) Seven times \(m\) plus 7 gets you 77.
   (vii) One fourth of a number minus 4 gives 4.
   (viii) If you take away 6 from 6 times \(y\), you get 60.
   (ix) If you add 3 to one third of \(z\), you get 30.

6. Write the following statements in the form of equations:
   (a) 11 added to \(2m\) to get 40.
   (b) 11 subtracted from \(2m\) to 25
   (c) 5 times \(y\) to which 3 is added to get 45
   (d) 5 times \(y\) from which 3 is subtracted to get 33
   (e) \(y\) is multiplied by \(-8\) to get 24
   (f) \(y\) is multiplied by \(-8\) and then 5 is added to the result to get 29.
   (g) \(y\) is multiplied by 5 and the result is subtracted from 16 to get 4
   (h) \(y\) is multiplied by \(-5\) and the result is added to 16 to get 8.

7. The length of a rectangular hall is 4 meters less than 3 times the breadth of the hall. What is the length, if the breadth is \(b\) meters?

8. Solve: (a) \(3n + 7 = 25\)  (b) \(2p - 1 = 23\)  (c) \(12p - 5 = 25\)

9. Solve: (a) \(3n - 2 = 46\)  (b) \(5m + 7 = 17\)  (c) \(10p = 100\)  (d) \(10p + 10 = 100\)
   (e) \(3s = -9\)  (f) \(3s + 12 = 0\)  (g) \(2q - 6 = 0\)  (h) \(2q + 6 = 12\)
   (i) \(\frac{20p}{3} = 40\)  (j) \(\frac{3p}{10} = 6\)  (k) \(\frac{3p}{4} = 6\)  (l) \(\frac{-p}{3} = 2\)
10. Solve: 
   (a) \(4(m + 3) = 18\) 
   (b) \(-2(x + 3) = 5\)

11. Solve the following equations. 
   (a) \(4 = 5(p - 2)\) 
   (b) \(-4 = 5(p - 2)\) 
   (c) \(-16 = -5(2 - p)\) 
   (d) \(10 = 4 + 3(t + 2)\) 
   (e) \(28 = 4 + 3(t + 5)\) 
   (f) \(0 = 16 + 4(m - 6)\)

16. The sum of three times a number and 11 is 32. Find the number.

17. Find a number, such that one fourth of the number is 3 more than 7.

18. When you multiply a number by 6 and subtract 5 from the product, you get 7. Find the number.

19. What is that number one third of which added to 5 gives 8?

20. Raju’s father’s age is 5 years more than three times Raju’s age. Find Raju’s age, if his father is 44 years old.

21. There are two types of boxes containing mangoes. Each box of the larger type contains 4 more mangoes than the number of mangoes contained in 8 boxes of the smaller type. Each larger box contains 100 mangoes. Find the number of mangoes contained in the smaller box?

22. The teacher tells the class that the highest marks obtained by a student in her class is twice the lowest marks plus 7. The highest score is 87. What is the lowest score?

23. In an isosceles triangle, the base angles are equal. The vertex angle is 40°. What are the base angles of the triangle? (Remember, the sum of three angles of a triangle is 180°).

24. Smita’s mother is 34 years old. Two years from now mother’s age will be 4 times Smita’s present age. What is Smita’s present age?

25. Sachin scored twice as many runs as Rahul. Together, their runs fell two short of a double century. How many runs did each one score?

26. Nine added to thrice a number a whole number gives 45. Find the number.

27. Four-fifths of a number is greater than three-fourths of the number by 4. Find the number.

28. Twice a number when decreased by 7 gives 45. Find the number.

29. Thrice a number when increased by 5 gives 44. Find the number.

30. Laxmi’s father is 49 years old. He is 4 years older than three times Laxmi’s age. What is Laxmi’s age?

31. Maya, Madhura and Mohsina are friends studying in the same class. In a class test in geography, Maya got 16 out of 25. Madhura got 20. Their average score was 19. How much did Mohsina score?

32. People of Sundargram planted a total of 102 trees in the village garden. Some of the trees were fruit trees. The number of non-fruit trees were two more than three times the number of fruit trees. What was the number of fruit trees planted?
33. The sum of two consecutive multiples of 3 is 69. Find the numbers.

34. The length of a rectangular plot exceeds its breadth by 5 m. If the perimeter of the plot is 142 m, find the dimensions of the plot.

35. Raju is 19 years younger than his cousin. After 5 years, their ages will be in the ratio 2 : 3. Find their present ages.

36. A father is 30 years older than his son. In 12 years, the man will be three times as old as his son. Find their present ages.

37. The ages of Arun and Rahul are in the ratio 7 : 5. Ten years hence, the ratio of their ages will be 9 : 7. Find their present ages.

38. In an examination, a student requires 40% of the total marks to pass. If Vandana gets 185 marks and fails by 15 marks, find the total marks.

39. Five years ago a man was seven times as old as his son. Five years hence, the father will be three times as old as his son. Find their present ages.

40. A sum of Rs. 500 is in the form of denominations of Rs. 5 and Rs. 10. If the total number of notes is 90, find the number of notes of each type.

41. The total cost of 3 tables and 2 chairs is Rs. 745. If a table costs Rs. 40 more than a chair, find the price of each.

42. After 12 years Uday will be 3 times as old as he was 4 years ago. Find his present age.

43. Two-third of a number less than the original number by 10. Find the original number.

44. Solve: \[\frac{x + 2}{x - 2} = \frac{7}{3}\]

45. Solve: \[\frac{x}{2} + \frac{x}{4} = \frac{1}{8}\]
MCQ WORKSHEET-I
CLASS – VII: CHAPTER – 5
LINES AND ANGLES

1. If two lines intersect at a point, then the vertically opposite angles are always ________
   (a) equal (b) unequal (c) supplementary (d) complementary

2. Two angles forming a linear pair are ____________.
   (a) equal (b) supplementary (c) unequal (d) complementary

3. A line that intersects two or more lines at distinct points is called
   (a) Parallel (b) transversal (c) intersecting (d) none of these

4. If two adjacent angles are supplementary, then they form __________.
   (a) Corresponding angles (b) vertically opposite angles
   (c) a linear pair of angles (d) a ray

5. If two angles are supplementary then the sum of their measures is __________.
   (a) 90° (b) 180° (c) 360° (d) 45°

6. If two angles are complementary, then the sum of their measures is __________.
   (a) 45° (b) 180° (c) 90° (d) 360°

7. If $l \parallel m$, then $\angle 1 = \angle 2$ because they are ________.
   (a) corresponding angles (b) vertically opposite angles
   (c) alternate interior angles (d) supplementary angles

8. In fig. pair of alternate interior angles are:
   (a) $\angle 1, \angle 3$ (b) $\angle 2, \angle 3$ (c) $\angle 2, \angle 5$ (d) $\angle 1, \angle 2$

9. If two parallel lines are cut by a transversal, each pair of the corresponding angles are
   __________ in measure.
   (a) equal (b) unequal (c) supplementary (d) complementary

10. Line $a \parallel b, c$ is a transversal then $\angle y =$ ?
    (a) 90° (b) 125° (c) 55° (d) 180°
MCQ WORKSHEET - II
CLASS – VII: CHAPTER – 5
LINES AND ANGLES

1. Line $a \parallel b$, $c$ is a transversal then $\angle y = ?$
   (a) $90^\circ$  (b) $25^\circ$  (c) $55^\circ$  (d) $35^\circ$

2. In fig. pair of alternate exterior angles are:
   (a) $\angle 1$, $\angle 3$  (b) $\angle 2$, $\angle 3$  (c) $\angle 2$, $\angle 5$  (d) $\angle 1$, $\angle 4$

3. The difference in the measures of two complementary angles is $12^\circ$. Find the measures of the angles.
   (a) $51^\circ$ and $49^\circ$  (b) $51^\circ$ and $39^\circ$  (c) $60^\circ$ and $30^\circ$  (d) $50^\circ$ and $40^\circ$

4. What is the measure of the complement of $45^\circ$?
   (a) $135^\circ$  (b) $25^\circ$  (c) $35^\circ$  (d) $45^\circ$

5. What is the measure of the complement of $65^\circ$?
   (a) $135^\circ$  (b) $25^\circ$  (c) $35^\circ$  (d) $45^\circ$

6. What is the measure of the complement of $41^\circ$?
   (a) $139^\circ$  (b) $49^\circ$  (c) $35^\circ$  (d) $45^\circ$

7. What is the measure of the complement of $54^\circ$?
   (a) $126^\circ$  (b) $49^\circ$  (c) $35^\circ$  (d) $41^\circ$

8. Identify which of the following pairs of angles are complementary
   (a) $65^\circ$, $115^\circ$  (b) $63^\circ$, $27^\circ$  (c) $112^\circ$, $68^\circ$  (d) $130^\circ$, $50^\circ$

9. Identify which of the following pairs of angles are supplementary.
   (a) $80^\circ$, $10^\circ$  (b) $63^\circ$, $27^\circ$  (c) $112^\circ$, $68^\circ$  (d) $45^\circ$, $45^\circ$

10. Find the angle, which is equal to its complement.
    (a) $30^\circ$  (b) $25^\circ$  (c) $35^\circ$  (d) $45^\circ$

Prepared by: M. S. KumarSwamy, TGT(Maths)
MCQ WORKSHEET-III
CLASS – VII: CHAPTER – 5
LINES AND ANGLES

1. Lines \( l \parallel m \), \( t \) is a transversal then \( \angle x = ? \)
   (a) 120°  (b) 60°  (c) 180°  (d) 90°

2. Find the angle, which is equal to its supplement.
   (a) 60°  (b) 90°  (c) 180°  (d) none of these

3. Lines \( l \parallel m \), \( t \) is a transversal then \( \angle x = ? \)
   (a) 120°  (b) 60°  (c) 180°  (d) 90°

4. Lines \( l \parallel m \); \( t \) is a transversal \( \angle z = ? \)
   (a) 120°  (b) 60°  (c) 180°  (d) 90°

5. Lines \( l \parallel m \); \( t \) is a transversal \( \angle x = ? \)
   (a) 120°  (b) 60°  (c) 180°  (d) 90°

6. The angle which is four times its complement is
   (a) 60°  (b) 30°  (c) 45°  (d) 72°
7. If arms of two angles are parallel, then find the $\angle DEF$
   (a) 15° (b) 90° (c) 180° (d) 75°

8. The angle which is five times its supplement is
   (a) 150° (b) 180° (c) 90° (d) 360°

9. Find $x$ if $l \parallel m$
   (a) 30° (b) 60° (c) 90° (d) 180°

10. Find the value of $x$ if $l \parallel m$
    (a) 110° (b) 70° (c) 90° (d) 180°

11. Which pair of following angles are complementary?
    (a) 70°, 20° (b) 75°, 25° (c) 48°, 52° (d) 35°, 55°

12. Which pair of following angles are supplementary?
    (a) 110°, 50° (b) 105°, 65° (c) 50°, 130° (d) 45°, 45°

13. What is complement of 63°?
    (a) 18° (b) 27° (c) 30° (d) 21°

14. Find the supplement of 105°.
    (a) 80° (b) 65° (c) 75° (d) 100°

15. Two lines PQ and RS intersect at O. If $\angle POR = 50°$, then value of $\angle ROQ$ is
    (a) 120° (b) 130° (c) 90° (d) 150°
1. What is the measure of the complement of each of the following angles?
   (i) 45° (ii) 65° (iii) 41° (iv) 54°
2. The difference in the measures of two complementary angles is 12°. Find the measures of the angles.
3. What will be the measure of the supplement of each one of the following angles?
   (i) 100° (ii) 90° (iii) 55° (iv) 125°
4. Among two supplementary angles the measure of the larger angle is 44° more than the measure of the smaller. Find their measures.
5. In the given figure, if \( \angle 1 = 30° \), find \( \angle 2 \) and \( \angle 3 \).

6. In Fig identify: (i) Five pairs of adjacent angles. (ii) Three linear pairs. (iii) Two pairs of vertically opposite angles.

7. Identify which of the following pairs of angles are complementary and which are supplementary.
   (i) 65°, 115° (ii) 63°, 27° (iii) 112°, 68° (iv) 130°, 50° (v) 45°, 45° (vi) 80°, 10°
8. Find the angle which is equal to its complement.
9. Find the angle which is equal to its supplement.
10. Find the measure of an angle which is 24° more than its complement.
11. Find the measure of an angle which is 32° less than its supplement.
12. Find the measure of an angle, if six times its complement is 12° less than twice its supplement.
13. Find the complement of each of the following angles:
    (i) 58° (ii) 160° (iii) \( \frac{2}{3} \) of a right angle.
14. Find the supplement of each of the following angles:
    (i) 630° (ii) 1380° (iii) \( \frac{3}{5} \) of a right angle.
15. Find the measure of an angle which is 36° more than its complement.
16. Find the measure of an angle which is 25° less than its complement.
17. Find the angle which is five times its complement.
18. Find the angle which is five times its supplement.
19. Find the angle whose supplement is four times its complement.
20. Find the angle whose complement is one-third of its supplement.
21. Two supplementary angles are in the ratio 3 : 2. Find the angles.
22. Two complementary angles are in the ratio 4 : 5. Find the angles.
23. Find the measure of an angle, if seven times its complement is 10° less than three times its supplement.
24. An angle is greater than 45°. Is its complementary angle greater than 45° or equal to 45° or less than 45°?

25. In the adjoining figure, name the following pairs of angles.
   (i) Obtuse vertically opposite angles
   (ii) Adjacent complementary angles
   (iii) Equal supplementary angles
   (iv) Unequal supplementary angles
   (v) Adjacent angles that do not form a linear pair

26. Lines $l \parallel m$; $t$ is a transversal Find the value of $\angle x$.

27. Lines $l \parallel m$; $t$ is a transversal. Find the value of $\angle z$.

28. Lines $l \parallel m$, $p \parallel q$; Find $a, b, c, d$.

29. Find the value of $x$ in adjoining figure if $l \parallel m$.

30. Find the value of $x$ in below figure if $l \parallel m$. 

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31. In the given figures below, decide whether \( l \) is parallel to \( m \).

32. In fig, find the value of \( x \)

33. In fig, if \( PQ \parallel ST \), \( \angle PQR = 110^0 \) and \( \angle RST = 130^0 \) then find the value of \( \angle QRS \).

34. In fig., \( AB \parallel CD \), \( \angle APQ = 50^0 \), \( \angle PRD = 127^0 \), find the value of \( x \) and \( y \) respectively are

35. Two complementary angles are in the ratio 3 : 6. Find the angles.
MCQ WORKSHEET-1
CLASS – VII: CHAPTER – 6
TRIANGLES AND ITS PROPERTIES

1. How many medians a triangle can have?
   (a) 2  (b) 1  (c) 3  (d) 0

2. A/an ___________ connect a vertex of a triangle to the mid point of the opposite side.
   (a) altitude  (b) median  (c) vertex  (d) none of these

3. How many altitude can a triangle have?
   (a) 1  (b) 2  (c) 3  (d) 4

4. Angle opposite to the side LM of ΔLMN
   (a) ∠N  (b) ∠L  (c) ∠M  (d) none of these

5. Side opposite to the vertex Q of ΔPQR
   (a) PQ  (b) QR  (c) PR  (d) none of these

6. Vertex opposite to the side RT of ΔRST
   (a) S  (b) T  (c) R  (d) none of these

7. In ΔPQR, PM is
   (a) Median  (b) altitude  (c) bisector  (d) side

8. Find the value of x in the adjoining figure.
   (a) 50°  (b) 70°  (c) 120°  (d) 180°

9. Find the value of x
   (a) 60°  (b) 110°  (c) 50°  (d) 180°
10. Find the value of $x$
   (a) $50^\circ$  (b) $60^\circ$  (c) $90^\circ$  (d) $80^\circ$

11. A triangle in which two sides are of equal lengths is called _____________.
   (a) Equilateral (b) Isosceles  (c) Scalene  (d) Acute angled triangle

12. The sum of the lengths of any two sides of a triangle is ____________ the third side of the triangle.
   (a) less than  (b) greater than  (c) double  (d) half

13. In the Pythagoras property, the triangle must be _____________.
   (a) acute angled  (b) right angled  (c) obtuse angled  (d) none of these.

14. Find the value of $x$ in this figure.
   (a) $40^\circ$  (b) $60^\circ$  (c) $35^\circ$  (d) $180^\circ$

15. Find the value of $x$ in given figure
   (a) $180^\circ$  (b) $55^\circ$  (c) $90^\circ$  (d) $60^\circ$
MCQ WORKSHEET-II
CLASS – VII: CHAPTER – 6
TRIANGLES AND ITS PROPERTIES

1. In ΔPQR, PD is
   (a) Median  (b) altitude  (c) bisector  (d) side

2. The value of x in the adjoining figure is
   (a) 125°  (b) 90°  (c) 180°  (d) 35°

3. Find the value of unknown x in the adjoining figure.
   (a) 50°  (b) 60°  (c) 70°  (d) 90°

4. What is the value of x in the below figure.
   (a) 50°  (b) 80°  (c) 30°  (d) 60°

5. What is the measure of angle x
   (a) 90°  (b) 60°  (c) 180°  (d) 120°

6. ΔABC is right-angled at C. If AC = 5 cm and BC = 12 cm find the length of AB.
   (a) 7 cm  (b) 17 cm  (c) 13 cm  (d) none of these.

7. PQR is a triangle right angled at P. If PQ = 3 cm and PR = 4 cm, find QR.
   (a) 7 cm  (b) 1 cm  (c) 5 cm  (d) none of these.
8. Which is the longest side in the triangle PQR right angled at P?
   (a) PQ  (b) QR  (c) PR  (d) none of these.

9. Which is the longest side in the triangle ABC right angled at B?
   (a) AB  (b) BC  (c) AC  (d) none of these.

10. Which is the longest side of a right triangle?
    (a) perpendicular  (b) base  (c) hypotenuse  (d) none of these.

11. What is the measure of angle $x$?
    (a) $90^\circ$  (b) $60^\circ$  (c) $180^\circ$  (d) $120^\circ$

12. The value of $x$ in the adjoining figure is
    (a) $25^\circ$  (b) $90^\circ$  (c) $45$  (d) $35^\circ$

13. A triangle in which all three sides are of equal lengths is called
    (a) Equilateral  (b) Isosceles  (c) Scalene  (d) Acute angled triangle

14. Find angle $x$ in below figure:
    (a) $25^\circ$  (b) $90^\circ$  (c) $40$  (d) $30^\circ$

15. Find angle $x$ in below figure:
    (a) $90^\circ$  (b) $60^\circ$  (c) $80^\circ$  (d) $40^\circ
MCQ WORKSHEET-III
CLASS – VII: CHAPTER – 6
TRIANGLES AND ITS PROPERTIES

1. In a \( \triangle ABC \), \( \angle A = 35^0 \) and \( \angle B = 65^0 \), then the measure of \( \angle C \) is
   (a) 50°   (b) 80°   (c) 30°   (d) 60°

2. The hypotenuse of a right triangle is 17 cm long. If one of the remaining two sides is 8 cm in length, then the length of the other side is
   (a) 15 cm   (b) 12 cm   (c) 13 cm   (d) none of these.

3. How many acute angles can a right triangle have?
   (a) 1   (b) 2   (c) 3   (d) 0

4. Find the unknown length \( x \) in the adjoining figure.

5. In a \( \triangle PQR \), \( \angle R = 105^0 \) and \( \angle Q = 40^0 \), then the measure of \( \angle P \) is
   (a) 45°   (b) 80°   (c) 30°   (d) 60°

6. In a \( \triangle ABC \), \( \angle A = 72^0 \) and \( \angle B = 63^0 \), then the measure of \( \angle C \) is
   (a) 45°   (b) 80°   (c) 30°   (d) 60°

7. In a \( \triangle XYZ \), \( \angle X = 90^0 \) and \( \angle Z = 48^0 \), then the measure of \( \angle Y \) is
   (a) 45°   (b) 40°   (c) 41°   (d) 42°

8. One of the acute angle of a right triangle is 36°, then the other acute angle is
   (a) 55°   (b) 54°   (c) 51°   (d) 52°

9. Find the unknown length \( x \) in the adjoining figure.
   (a) 5   (b) 7   (c) 3   (d) 4

10. Find the unknown length \( x \) in the below figure.

11. The acute angles of right triangle are in the ratio 2 : 1. Find the measure of each of these angles.
    (a) 55° and 35°   (b) 60° and 30°   (c) 50° and 40°   (d) 45° and 45°

12. One of the angles of a triangle is 100° and the other two angles are equal. Find the measure of each of these equal angles.
    (a) 45°   (b) 40°   (c) 41°   (d) 42°
PRACTICE QUESTIONS

CLASS – VII: CHAPTER – 6

TRIANGLES AND ITS PROPERTIES

1. Write the six elements (i.e., the 3 sides and the 3 angles) of \( \triangle ABC \).

2. Write the:
   (i) Side opposite to the vertex Q of \( \triangle PQR \)
   (ii) Angle opposite to the side LM of \( \triangle LMN \)
   (iii) Vertex opposite to the side RT of \( \triangle RST \)

3. In \( \triangle PQR \) given in the adjoining figure, D is the mid-point of \( QR \).
   \( PM \) is \( ________________ \)
   \( PD \) is \( ________________ \)
   Is QM = MR?

4. Prove that “An exterior angle of a triangle is equal to the sum of its interior opposite angles”.

5. An exterior angle of a triangle is of measure 70º and one of its interior opposite angles is of measure 25º. Find the measure of the other interior opposite angle.

6. The two interior opposite angles of an exterior angle of a triangle are 60º and 80º. Find the measure of the exterior angle.

7. Find the value of \( x \) in the adjoining figure.

8. Find the value of \( x \) in the adjoining figure.

9. Find the value of \( x \) in the below figure.

10. Find the value of \( x \) in the adjoining figure.

11. An exterior angle of a triangle is of measure 113º and one of its interior opposite angles is of measure 25º. Find the measure of the other interior opposite angle.

12. The two interior opposite angles of an exterior angle of a triangle are 49º and 41º. Find the measure of the exterior angle.
13. Prove that “The sum of all interior angles of a triangle is 180°.”
14. In the given figure, find m∠P.

15. Two angles of a triangle are 30° and 80°. Find the third angle.
16. One of the angles of a triangle is 80° and the other two angles are equal. Find the measure of each of the equal angles.
17. The three angles of a triangle are in the ratio 1:2:1. Find all the angles of the triangle.
18. Find the value of the unknown x in the below figure.

19. Find the value of the unknown x in the adjoining figure.

20. Find the value of the unknown x in the below figure.

21. Find the value of x and y in the adjoining figure.

22. Find the value of x and y in the below figure.

23. Find the value of x and y in the adjoining figure.
24. Is there a triangle whose sides have lengths 10.2 cm, 5.8 cm and 4.5 cm?
25. The lengths of two sides of a triangle are 6 cm and 8 cm. Between which two numbers can length of the third side fall?
26. AM is a median of a triangle ABC. Is \(AB + BC + CA > 2AM\)?
(Consider the sides of triangles ABM and AMC.)

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27. ABCD is a quadrilateral. Is \(AB + BC + CD + DA > AC + BD\)?
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28. ABCD is quadrilateral. Is \(AB + BC + CD + DA < 2(AC + BD)\)?
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29. The lengths of two sides of a triangle are 12 cm and 15 cm. Between what two measures should the length of the third side fall?
30. Determine whether the triangle whose lengths of sides are 3 cm, 4 cm, 5 cm is a right-angled triangle.
31. \(\triangle ABC\) is right-angled at C. If \(AC = 5\) cm and \(BC = 12\) cm find the length of \(AB\).
32. Find the value of \(x\) in the below figure.

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33. Find the value of \(x\) in the adjoining figure.
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34. Find the value of \(x\) in the below figure.
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35. \(\triangle PQR\) is a triangle right angled at P. If \(PQ = 10\) cm and \(PR = 24\) cm, find \(QR\).
36. \(\triangle ABC\) is a triangle right angled at C. If \(AB = 25\) cm and \(AC = 7\) cm, find \(BC\).
37. A 15 m long ladder reached a window 12 m high from the ground on placing it against a wall at a distance \(a\). Find the distance of the foot of the ladder from the wall.
38. A tree is broken at a height of 5 m from the ground and its top touches the ground at a distance of 12 m from the base of the tree. Find the original height of the tree.
39. Find the perimeter of the rectangle whose length is 40 cm and a diagonal is 41 cm.
40. The diagonals of a rhombus measure 16 cm and 30 cm. Find its perimeter.
PRACTICE QUESTIONS
CLASS – VII: CHAPTER – 10
PRACTICAL GEOMETRY

1. Draw a line AB and take a point P outside it. Draw a line CD parallel to AB and passing through the point P.

2. Draw a line AB and draw another line CD parallel to AB at a distance of 3.5 cm from it.

3. Draw a line ‘l’ and draw another line ‘m’ parallel to ‘l’ at a distance of 4.3 cm from it.

4. Construct a triangle ABC, given that AB = 5 cm, BC = 6 cm and AC = 7 cm.

5. Construct a triangle DEF such that DE = 5 cm, EF = 6 cm, and DF = 7 cm.

6. Draw ΔPQR with PQ = 4 cm, QR = 3.5 cm and PR = 4 cm. What type of triangle is this?

7. Construct ΔABC such that AB = 2.5 cm, BC = 6 cm and AC = 6.5 cm. Measure ∠B.

8. Construct a triangle PQR, given that PQ = 3 cm, QR = 5.5 cm and ∠PQR = 60°.

9. Construct an isosceles triangle in which the lengths of each of its equal sides is 6.5 cm and the angle between them is 110°.

10. Construct ΔXYZ if it is given that XY = 6 cm, m∠ZXY = 30° and m∠XYZ = 100°.

11. Examine whether you can construct ⊿DEF such that EF = 7.2 cm, m∠E = 110° and m∠F = 80°. Justify your answer.

12. Construct ΔLMN, right-angled at M, given that LN = 5 cm and MN = 3 cm.

13. Construct a right-angled triangle whose hypotenuse is 6 cm long and one of the legs is 4 cm long.

14. Construct an isosceles right-angled triangle ABC, where m∠ACB = 90° and AC = 6 cm.

15. Construct a triangle ABC in which AB = 5 cm, AC = 4.3 cm and ∠A = 60°. Also draw the perpendicular bisector of BC.

16. Construct a triangle PQR in which QR = 4.2 cm, ∠Q = 120° and PQ = 3.5 cm. Draw PM ⊥ QR.

17. Construct a triangle ABC in which AB = AC = 4.8 cm and BC = 5.3 cm. Measure ∠B and ∠C. Draw AD ⊥ BC.

18. Construct a triangle PQR in which QR = 6 cm, PQ = 4.4 cm and PR = 5.3 cm. Draw the bisector of ∠P.

19. Construct an equilateral triangle each of whose sides measures 6.2 cm. Measure each one of its angle.

20. Construct a right-angled triangle whose hypotenuse measure 5.6 cm and one of whose acute angles measures 30°.
MCQ WORKSHEET-I
CLASS VII: CHAPTER - 13
EXPONENTS AND POWERS

1. Express 256 as a power 4.
   (a) $4^8$  (b) $2^8$  (c) $4^4$  (d) none of these

2. Express 729 as a power of 3
   (a) $3^8$  (b) $3^6$  (c) $9^3$  (d) none of these

3. Express 2048 as a power 2.
   (a) $2^{16}$  (b) $2^8$  (c) $4^8$  (d) none of these

4. Which one is greater?
   (a) $2^3$  (b) $3^2$  (c) $1^8$  (d) $4^2$

5. Express 432 as a product of powers of prime factors.
   (a) $2^3 \times 3^3$  (b) $2^4 \times 3^3$  (c) $16 \times 27$  (d) none of these

6. The value of $(-1)^{55}$ is
   (a) $-1$  (b) 1  (c) 0  (d) none of these

7. The value of $(-1)^{500}$ is
   (a) $-1$  (b) 1  (c) 0  (d) none of these

8. The value of $2^8$ is
   (a) 128  (b) 256  (c) 512  (d) none of these

9. Simplify and write in exponential form of $2^2 \times 2^5$
   (a) $2^3$  (b) $2^7$  (c) 128  (d) none of these

10. Simplify and write in exponential form of $(-4)^{120} \times (-4)^{80} \times (-4)^{2000}$
    (a) $(-4)^{120}$  (b) $(-4)^{80}$  (c) $(-4)^{2000}$  (d) none of these

11. Simplify and write in exponential form of $5^2 \times 5^7 \times 5^{12}$
    (a) $5^3$  (b) $5^7$  (c) $5^{21}$  (d) none of these

12. The value of $2^2$
    (a) 3  (b) 10  (c) 4  (d) 7

13. The exponent in the expression $3^7$ is _______ .
    (a) 1  (b) 7  (c) 0  (d) 3

14. The value of $3^0$ is _______ .
    (a) 0  (b) 3  (c) 1  (d) None of these

15. Multiplicative inverse of $\frac{1}{7}$ is _______ .
    (a) 49  (b) 5  (c) 7  (d) -14

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MCQ WORKSHEET-II
CLASS VII: CHAPTER - 13
EXPONENTS AND POWERS

1. Fill in the Blank \( a^m \div a^n = a^{\ldots...} \) Where \( m \) and \( n \) are natural numbers:-
   (a) \( mn \)                (b) \( m + n \)                (c) \( m - n \)                (d) \( m \div n \)

2. Express \( (2a)^4 \) in exponential form.
   (a) \( 4a^3 \)                (b) \( 16a^4 \)                (c) \( 2a^4 \)                (d) \( 8a^4 \)

3. The value of \( \frac{1}{3^2} \) is equal to \( \ldots... \) .
   (a) \( \frac{1}{9} \)                (b) \( 1 \)                (c) \( -6 \)                (d) \( \frac{1}{3} \)

4. Find the value of \( 11^2 \)
   (a) \( 22 \)                (b) \( 9 \)                (c) \( 121 \)                (d) \( 13 \)

5. In simplified form \( (3^0 + 4^0 + 5^0)^0 \) is equals to
   (a) \( 12 \)                (b) \( 3 \)                (c) \( 12 \)                (d) \( 1 \)

6. Find the value of \( \left( \frac{2}{3} \right)^2 \)
   (a) \( \frac{4}{9} \)                (b) \( \frac{9}{4} \)                (c) \( \frac{-2}{9} \)                (d) \( 0 \)

7. In standard form \( 52,00,00,000 \) is equal to \( \ldots... \) .
   (a) \( 5.2 \times 10^7 \)                (b) \( 5.2 \times 10^8 \)                (c) \( 52 \times 10^6 \)                (d) \( 52 \times 100,00,000 \)

8. Usual form of the expression \( 10^4 \) is given by \( \ldots... \) .
   (a) \( 100,00 \)                (b) \( 1,0000 \)                (c) \( 10 \times 10^4 \)                (d) \( 10,000 \)

9. 1 micron is equals to \( \ldots... \) .
   (a) \( \frac{1}{1000000} \) m                (b) \( 10^6 \) m                (c) \( 10^5 \) m                (d) \( 10^7 \) m

10. The approximate distance of moon from the earth is \( 384,467,000 \) m and in exponential form this distance can be written as \( \ldots... \) .
    (a) \( 3.84,467 \times 10^8 \) m                (b) \( 384,467 \times 10^8 \) m                (c) \( 384,467 \times 10^{-9} \) m                (d) \( 3.844,67 \times 10^{-13} \) m

11. \( 7 \times 10^5 \) m is the standard form of which of the following \( \ldots... \) .
    (a) \( 0.0007 \) m                (b) \( 0.000007 \) m                (c) \( 0.0000007 \) m                (d) \( 0.00007 \) m

12. The standard form of \(4050000\) is given by \( \ldots... \) .
    (a) \( 4.05 \times 10^6 \)                (b) \( 40.5 \times 10^5 \)                (c) \( 405 \times 10^5 \)                (d) \( 4.05 \times 10^6 \)

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MCQ WORKSHEET-III
CLASS VII: CHAPTER - 13
EXONENTS AND POWERS

1. Which one of the following is the value of \(1^{15}\)
   (a) 0  (b) 15  (c) 1  (d) None of these

2. Fill in the blank: \((-1)^{\text{even number}} = \_\_\_\_\_.\)
   (a) 2 x (-1)  (b) 1  (c) 0  (d) \(-1^3\)

3. Fill in the blank: \((-1)^{\text{odd number}} = \_\_\_\_.\)
   (a) 1  (b) -1  (c) 2  (d) 0

4. Value of \((3^0 + 2^0) \times 5^0\) is
   (a) 1  (b) 25  (c) 2  (d) 0

5. The value of \(7^2\) is ___________.
   (a) 7  (b) 49  (c) 2  (d) 14

6. The base in the expression \(8^{10}\) is ___________.
   (a) 10  (b) 2  (c) 8  (d) 800

7. The value of \(100^0\) is ___________.
   (a) 0  (b) 100  (c) 1  (d) None of these

8. Find the number from the following expanded form: \(9 \times 10^5 + 2 \times 10^2 + 3 \times 10^1\)
   (a) 900203  (b) 912351  (c) 905302  (d) 900230

9. Value of \((2^3)^2\) is given by ____________.
   (a) 64  (b) 32  (c) 12  (d) None of these

10. The value of \(7^2 \div 7^3\) is given by ____________.
    (a) \(\frac{1}{7}\)  (b) 7  (c) \(\frac{1}{14}\)  (d) -7

11. The value of \(\frac{1}{5^2}\) is equal to ____________.
    (a) -5  (b) 25  (c) -15  (d) \(\frac{1}{25}\)

12. In exponential form \(140,000,000,000\) Kg is given by ____________.
    (a) \(1.4 \times 10^{10}\) Kg  (b) \(1.4 \times 10^9\) Kg  (c) \(14 \times 10^8\) Kg  (d) \(1.4 \times 10^{11}\) Kg

13. The expression \(5^2 + 7^2 + 3^2\) is equal to the product
    (a) 15\(^6\)  (b) -6  (c) 1  (d) 83

14. The value of \(\left(\frac{1}{6}\right)^2\) is ____________.
    (a) \(\frac{1}{12}\)  (b) \(\frac{2}{3}\)  (c) \(\frac{1}{36}\)  (d) 2
MCQ WORKSHEET-IV
CLASS VII: CHAPTER - 13
EXPONENTS AND POWERS

1. In standard form 56700000 is written as ________________.
   (a) 5.67 x 10^7  (b) 567 x 10^7  (c) 5.67 x 10^5  (d) 567 x 100000

2. Usual form of the expression 9 x 10^-5 is given by ________________.
   (a) 0.00009  (b) 0.000009  (c) 90 x 10^-4  (d) 0.09 x 10^-3

3. The number 86,800,000,000,000,000,000,000,000 Kg is equal to ________________.
   (a) 8.68 x 10^25 Kg  (b) 868 x 10^23 Kg  (c) 86.8 x 10^23 Kg  (d) 868 x 10^23 m

4. Charge of an electron is 0.000,000,000,000,000,000,000,16 coulomb and in exponential form it can
   be written as ________________.
   (a) 16 x 10^-18 coulomb  (b) 1.6 x 10^-21 coulomb  (c) 1.6 x 10^-19 coulomb  (d) 16 x 10^-21 coulomb

5. 13 x 10^-7 Km is the standard form of which of the following ________________.
   (a) 0.000000013 Km  (b) 0.0000013 Km  (c) 0.000000000013 Km  (d) 0.00000000013 Km

6. The standard form of 9,030,000,000 is given by ________________.
   (a) 9.03 x 10^9  (b) 90.3 x 10^7  (c) 903 x 10^6  (d) 9.03 x 10^9

7. Which one of the following is the value of 3^5
   (a) 3  (b) 15  (c) 2  (d) 243

8. Find the value of 5^0 x 7^0 x 3^0
   (a) 1  (b) 1/24  (c) 6  (d) 1/5 x 7 x 3

9. 64 in exponential form is ________________.
   (a) 2^6  (b) 16^2  (c) 1/8^2  (d) 2^4

10. The value of 2^0 x 3^0 x 4^0 is
    (a) 1  (b) 0  (c) 24  (d) None of these

11. 1024 in exponential form is ________________.
    (a) 2^6  (b) 16^2  (c) 1/8^2  (d) None of these

12. The value of \( \frac{2^2}{3^2} \) in the exponential form is
    (a) \( \left( \frac{2}{3} \right)^4 \)  (b) \( \left( \frac{2}{3} \right)^2 \)  (c) \( \left( \frac{2}{3} \right)^0 \)  (d) None of these
1. Express:
   (i) 729 as a power of 3
   (ii) 128 as a power of 2
   (iii) 343 as a power of 7
   (iv) 256 as a power 2.

2. Which one is greater $2^3$ or $3^2$?

3. Which one is greater $8^2$ or $2^8$?

4. Express the following numbers as a product of powers of prime factors:
   (i) 72 (ii) 432 (iii) 1000 (iv) 16000

5. Express each of the following numbers using exponential notation:
   (i) 512 (ii) 343 (iii) 729 (iv) 3125

6. Simplify:
   (i) $(-4)^3$ (ii) $(-3) \times (-2)^3$ (iii) $(-3)^2 \times (-5)^2$ (iv) $(-2)^3 \times (-10)^3$

7. Compare the following numbers:
   (i) $2.7 \times 10^{12}$; $1.5 \times 10^8$ (ii) $4 \times 10^{14}$; $3 \times 10^{17}$

8. Simplify and write in exponential form:
   (i) $2^5 \times 2^3$
   (ii) $p^3 \times p^2$
   (iii) $4^3 \times 4^2$
   (iv) $a^3 \times a^2 \times a^7$
   (v) $5^3 \times 5^7 \times 5^{12}$
   (vi) $(-4)^{100} \times (-4)^{20}$

9. Simplify and write in exponential form:
   (i) $2^9 \div 2^3$
   (ii) $10^8 \div 10^4$
   (iii) $9^{11} \div 9^7$
   (iv) $20^{15} \div 20^{13}$
   (v) $7^{13} \div 7^{10}$

10. Express the following terms in the exponential form:
    (i) $(2 \times 3)^3$ (ii) $(2a)^4$ (iii) $(-4m)^3$
11. Simplify and write the answer in exponential form:
   (i) \( 6^{2^4} \)
   (ii) \( (2^2)^{100} \)
   (iii) \( (7^{50})^2 \)
   (iv) \( (5^1)^7 \)

12. Expand:
   (i) \( \left( \frac{3}{5} \right)^4 \)  
   (ii) \( \left( \frac{4}{7} \right)^5 \)

13. Write exponential form for \( 8 \times 8 \times 8 \times 8 \) taking base as 2.

14. Simplify and write the answer in the exponential form.
   (i) \( \left( \frac{3^7}{3^2} \right) \times 3^5 \) (ii) \( 2^3 \times 2^2 \times 2^5 \) (iii) \( (6^2 \times 6^4) \div 6^3 \)
   (iv) \( \left( 2^2 \right)^3 \times 3^6 \) \( \times 5^6 \) (v) \( 8^2 \div 2^3 \)

15. Simplify:
   (i) \( \frac{12^4 \times 9^3 \times 4}{6^3 \times 8^3 \times 27} \) (ii) \( 2^3 \times a^3 \times 5a^4 \) (iii) \( \frac{2 \times 3^4 \times 2^5}{9 \times 4^2} \)

16. Express each of the following as a product of prime factors only in exponential form:
   (i) \( 108 \times 192 \) (ii) \( 270 \) (iii) \( 729 \times 64 \) (iv) \( 768 \)

17. Simplify:
   (i) \( \frac{(2^5)^2 \times 7^3}{8^3 \times 7} \) (ii) \( \frac{25 \times 5^2 \times t^8}{10^3 \times t^4} \) (iii) \( \frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5} \)

18. Write the following numbers in standard form.
   (i) \( 0.000000564 \)
   (ii) \( 0.000021 \)
   (iii) \( 21600000 \)
   (iv) \( 15240000 \)
   (v) \( 6020000000000000 \)

19. Express the following numbers in standard form.
   (i) \( 0.000000000000000000000035 \)
   (ii) \( 40500000000000 \)
   (iii) \( 51000000000000000000000 \)
   (iv) \( 0.00000000000000000000000000000000625 \)
   (v) \( 0.00000000000001257 \)
20. Express the following numbers in usual form.
   (i) $3.52 \times 10^5$
   (ii) $7.54 \times 10^{-4}$
   (iii) $3 \times 10^{-5}$
   (iv) $5.25 \times 10^{-7}$
   (v) $8.525 \times 10^9$

21. Express the number appearing in the following statements in standard form.
   (i) 1 micron is equal to $\frac{1}{1000000}$ m.
   (ii) Charge of an electron is 0.000,000,000,000,000,000,000,16 coulomb.
   (iii) Size of a bacteria is 0.0000005 m
   (iv) Size of a plant cell is 0.00001275 m
   (v) Thickness of a thick paper is 0.07 mm
   (vi) Mass of Uranus = 86,800,000,000,000,000,000,000,000,000 kg
   (vii) Mass of the Earth = 5,976,000,000,000,000,000,000,000,000 kg
   (viii) Distance of Sun from the centre of our Galaxy = 300,000,000,000,000,000,000,000 m
   (ix) Sun is located 300,000,000,000,000,000,000 m from the centre of our Milky Way Galaxy.
   (x) The distance between Sun and Saturn is 1,433,500,000,000 m