Class: VIII   **Subject: Maths**

Topic: 1. Understanding Quadrilateral
        2. Algebric Expressions and Identities
        3. Direct and Inverse proportions
        4. Factorisation

1. Sum of angles of a polygon is:
   a. $\dfrac{n}{2}$ x 180   b. 2n X 180   c. (n- 2) X 180   d. (n + 2) X 180

2. $(100 + 2)^2 =$
   a. 10204   b. 10304   c. 10404   d. None

3. If 15 workers can built a wall in 48hours. Then workers required to complete the work in 30 hours will be
   a. 26   b. 28   c. 24   d.30

4. Three angles of a quadrilateral are 45, 63 and 100, then measure of 4th angle is:
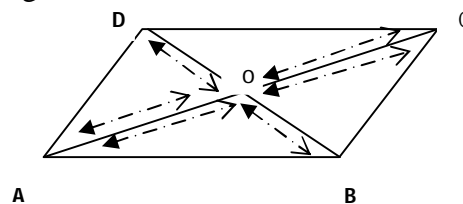   a. 122   b. 132   c. 142   d. 152

5. Explain how a square is
   a. a quadrilateral   b. a rhombus   c. a rectangle

6. Prove that sum of angles of a quad is 360**.**

7. Find the value of x and y, if ABCD is a IIgm and OA= x+y, OC=8 ,OD= x+3, OB= 10.

8. Subtract $3p +4pq- 8q^2 + 5p^2$ from $10p-2pq+5q^2-3p^2$

9. Subtract the sum of $8x -3y^2+4xy$ and $3xy +2x+10y^2$ from $20x+15xy-7y^2$

10. Simplify
    $(a - b) (c + d) – (a + b)(c – d) +3(ac – bd)$

11. Simplify
    $(8px- 3cx)^2 +(8px + 3cx)^2$

12. Evaluate by using Identities
    a. $(9.8)^2$ b. $(103)^2$ c. 295 X 305

13. Cost of 25 kg apples is Rs 225 will be the cost of 13 Kg apples of same variety?

14. A train is moving at a uniform speed of 50km/hr.
  a. How far will it travel in 35 minutes?
  b. Find the time required to cover a distance of 225 Km.

15. A can do a piece of work in 10 days and B can do same work in 6 days. How many days will be taken to complete the work if both A and B work together.

16. Pipe A can fill a tank in 15 hours. Find the time taken by pipe B to fill the tank if bith A and B take 6 hours to fill the tank completely.

17. 6 pipes are required to fill a tank in 1 hour 20 minutes. How long will it take if only 5 pipes of the same type are used?

18. Factorize
  a. $4x^2 + 20x + 25$
  b. $a^2 - b^2 - c^2 + d^2 - 2(ad - bc)$

19. Factorize
  a. $9a^2 + 12ab + 4b^2$
  b. $x^4 + 2 + \dfrac{1}{x^4}$
  c. $1 - 16x^2 + 64x^4$

20. Factorize
  a. $a^{16} - b^{16}$
  b. $p^4 - (p - q)^4$

21. Simplify: $\left(n + \dfrac{1}{n} \right)^2 + (n - \dfrac{1}{n})^2$

22. Find the value of x if
  a) $6x = 29^2 - 23^2$
  b) $4x = 98^2 - 88^2$

23. Divide using factorization
  1. $25(x-2)(x+4)$ by $5(x-2)$
  2. $64(x^2-25)$ by $x+5$
  3. $7(x^2+6x+9)$ by $x+3$
  4. $1-a^2-2ab-b^2$
  5. $(x^4-22x^2y^2+121y^4) -169$

24. Length of two sides of a IIgm are in the ratio 3:4. Find the sides of a IIgm if its perimeter is 28cm .