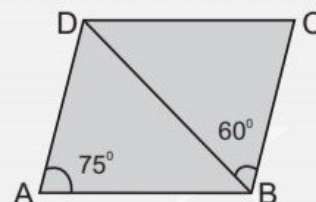


Q2. Express the following in an exponential form.

S. No.	Number	Unit's digit
1.	60^2	
2.	75^2	
3.	93^2	
4.	1431^2	
5.	98^2	
6.	79^2	
7.	214^2	
8.	26^2	
9.	77^2	
10.	56^2	

- | | | |
|-------------|---|----------------------|
| 1. 6561 | = | <input type="text"/> |
| 2. 108900 | = | <input type="text"/> |
| 3. 10.24 | = | <input type="text"/> |
| 4. 1245.456 | = | <input type="text"/> |
| 5. 4.0960 | = | <input type="text"/> |

 $\angle CDB = \boxed{}$ $\angle ADB = \boxed{}$ 

Q3. State True or False.

1. Same number can be multiplied to both sides of an equation.
2. The solution of the equation $5(x - 6) = 80$ is 24.
3. There can be many solutions for the equation $7 + x = 25$.
4. If the degree of an equation is 2, it is called a linear equation.
5. If a ray stands on a line then the sum of the adjacent angles so formed is 180° .
6. Every integer is a rational number.
7. A rational number is less than all those rational numbers that lie to its left on the number line.
8. -216 can be expressed as third power of (-6) .
9. An isosceles triangle has three lines of symmetry.
10. A square has rotational symmetry.
11. When an object rotates, its shape changes.
12. All octagon have rotational symmetry of order 8.
13. If a shape possess rotational symmetry, it will surely have line of symmetry.
14. In a triangle the angle opposite the largest side is the smallest.
15. A right triangle can be drawn with side 5 cm and an angle 50° .

Q6. Match the following.

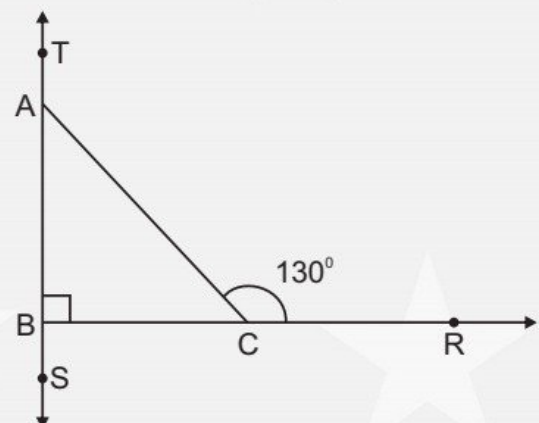
- | | | |
|---|---------|----------------------|
| 1. Profit percent of cost price Rs. 500 and S.P. Rs. 600 | [] | a. $33\frac{1}{3}\%$ |
| 2. Rate of interest when Rs. 200 yield interest of Rs. 400 in 2 years | [] | b. Profit 25% |
| 3. Percent equal to $\frac{4}{12}$ | [] | c. 5% |
| 4. Percent equal to 0.65 | [] | d. loss 25% |
| 5. Profit / loss when CP 200 and SP 1500 | [] | e. PRT/100 |
| 6. Amount paid on Rs. P at R% P.A. after T years | [] | f. 20% |
| 7. Profit / loss when CP=300 and SP=225 | [] | g. 65% |
| 8. Ratio of Rs. 500 to Rs. 1 lakh | [] | h. 10% |
| 9. Percent equal to 2 : 5 | [] | i. 125% |
| 10. Fraction $\frac{5}{4}$ | [] | j. 40% |

Q7. Complete the following table for a rectangle.

S.No.	Length	Breadth	Perimeter	Area
1.	12 m	8 m		
2.	8 m	250 cm		
3.	10 m		44 m	
4.	1200 cm			72 m^2
5.	800 cm			

Q8. On the basis of given figure, match the columns.

Column A	Column B
1. $\angle BAC$	a. 140°
2. $\angle TAC$	b. 180°
3. $\angle SBC$	c. 50°
4. $\angle ACB + \angle ACR$	d. 40°
5. $\angle ACB$	e. 90°



Q11. Anju bakes a cake in the oven. The ingredients for a cake sufficient for 8 persons are tabulated below. Fill table for missing entries.

Ingredient	For 8 persons	For 1 person	For 50 persons
Flour (g)	500		
Water (ml)		6	
Sugar (g)			1250
Butter (g)		12.5	
Others (g)	24		

Q12. Check the divisibility and put a tick (✓) if divisible and cross (×) if not.

Number	divisible by					Yes	No
	2	3	5	9	11		
25040							
31434							
356022							
1111110000120							
87563421							

Q13. Simplify the following.

(i) $\frac{3}{7} \left(\frac{6}{11} + \frac{1}{11} \right) = \boxed{}$

(ii) $\frac{3}{17} \times \frac{3}{5} + \frac{3}{17} \times \frac{2}{5} = \boxed{}$

(iii) $\left(-5 \times \frac{2}{15} \right) - \left(-6 \times \frac{2}{9} \right) = \boxed{}$

(iv) $\left(\frac{-9}{4} \times \frac{5}{3} \right) \div \left(\frac{13}{2} \times \frac{5}{6} \right) = \boxed{}$

(v) $\frac{1}{5} \div \left(\frac{2}{25} \times \frac{5}{6} \div \frac{1}{12} \right) = \boxed{}$

(vi) $\left(\frac{2}{5} + \frac{4}{12} \right) \times \left[\frac{11}{24} + \frac{(-7)}{8} \right] = \boxed{}$

(vii) $\left(\frac{3}{11} \times \frac{5}{6} \right) - \left(\frac{9}{12} \times \frac{4}{3} \right) + \left(\frac{5}{18} \times \frac{6}{15} \right) = \boxed{}$

Q14. Study the problems given below and write the answers.

1. A jet moves at the speed of 500 km/hr. How far does it travel in $2\frac{2}{3}$ hours?

Ans. km

2. Arun works out at a gym for three quarters of an hour. He uses the treadmill for half the total workout session time and one-third on cycle. Find the total time he spends on other miscellaneous exercises.

Ans. hour

3. In a rock concert, $\frac{2}{7}$ of spectators purchased Rs. 1000 tickets while remaining 15,000 purchased Rs. 500 tickets. How many spectators viewed the concert.

Ans. spectators

4. A farmer grows rice in $\frac{15}{2}$ hectares of land, if he produces $\frac{47}{3}$ quintals per hectare, how much rice does he produce?

Ans. quintals

5. A rope is $13\frac{3}{5}$ m long. It is divided into 6 equal parts. How long is each part?

Ans. m

Q15. Points V, W, X, Y, Z represent different rational numbers on the number line shown below. Write the rational numbers represented by each.



V

W

X

Y

Z

Q16. Given a general expression, write first four in the number pattern, where n/x is a natural number.

1. $2n - 3$

_____, _____, _____, _____

2. $x^2 + 1$

_____, _____, _____, _____

3. $6n$

_____, _____, _____, _____

4. $4n - 1$

_____, _____, _____, _____

5. $3x + 3$

_____, _____, _____, _____

6. $5n - 2$

_____, _____, _____, _____