Roll No.	
Name	
Class & Section	

APEEJAY SCHOOL, NOIDA

FIRST TERM EXAMINATION — (2018-19)

Mathematics

Duration : 3 Hrs. **Class – VII** **Maximum Marks : 80**

General Instructions :

(i) **All questions are compulsory.**

(ii) **Q. 1-6 carry 1 mark each.**

(iii) **Q. 7-12 carry 2 marks each.**

(iv) **Q. 13-22 carry 3 marks each.**

(v) **Q. 23-30 carry 4 marks each.**

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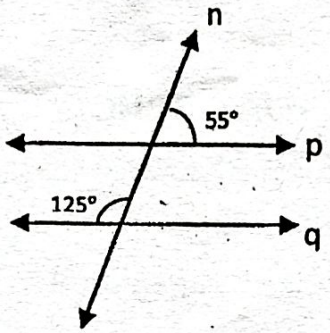
1. Write 356.789 in standard form.
2. Find the angle which is equal to its complement.
3. Find x such that $\frac{7}{-9}$ and $\frac{-35}{x}$ are equivalent rational numbers.
4. Evaluate :

   $(6^0 + 2^0) \times 3^0$
5. The difference of an integer p and -6 is -1. Find the value of p.
6. What should be added to 55.977 to get 73.1?
7. Rewrite the following rational numbers in the simplest form :

   (a) $\frac{-28}{63}$ (b) $\frac{91}{-364}$
8. Find area of rectangle whose length is 4.2 cm and breadth is 2.1 cm.
9. Represent $\frac{-3}{8}$ on the number line.
10. The three angles of a triangle are in the ratio 1 : 2 : 1. Find all the angles of the triangle. Classify the triangle based on sides and angles both.

11. In the given figure, decide whether p is parallel to q or not.



12. Evaluate :

$$\frac{0.2 \times 0.14 + 0.5 \times 0.91}{0.1 \times 0.2}$$

13. Draw a line parallel to a given line l at a distance of 2.5 cm using ruler and compasses.

14. Given that line AB is parallel to CD, EF is transversal and measure of two co-interior angles is in the ratio 2 : 3. Find measure of each of co-interior angles.

15. Express the following as a product of prime factors only in the exponential form :

$(-729) \times 108$

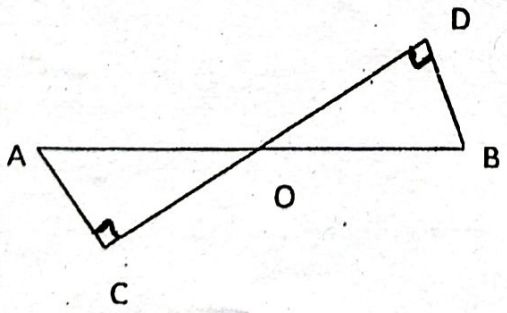
16. Evaluate the following using suitable properties. Also mention the name of property used.

(i) $3657 \times 99 - (-3657)$ (ii) $8 \times 26 \times (-125)$

17. In the given figure, line segments AB and CD bisect each other at O. Also, $AC \perp CD$ and $BD \perp CD$. Then,

(i) Is $\Delta ACO \cong \Delta BDO$. Given reasons.

(ii) Is $AC = BD$. Give reasons.



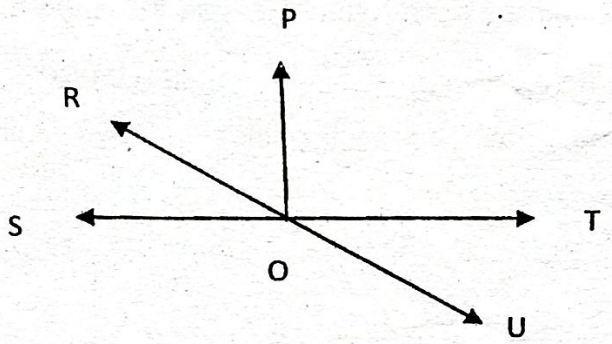
18. An elevator descends into a shaft at a rate of 3m/min. If the descent starts from 40m above the ground level, how long will it take to reach –20 m?

19. In the adjoining figure, RU and ST are intersecting lines and ray OP stands on line ST. Name the following pairs of angles :

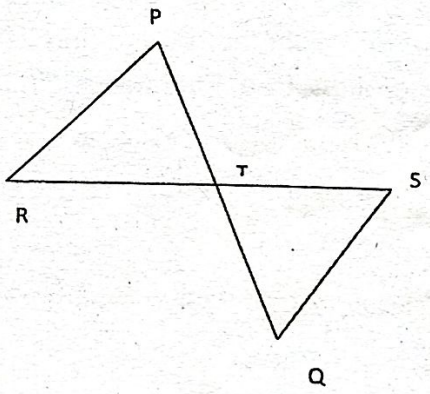
(i) Obtuse vertically opposite angles.

(ii) Adjacent complementary angles.

(iii) Equal supplementary angles.



20. Find $\angle PTR$, $\angle SQT$ and $\angle STQ$. If $\angle PRT = 40°$, $\angle RPT = 95°$ and $\angle TSQ = 75°$



21. Simplify :

$$\frac{7}{5} \text{ of } \left(\frac{4}{9} + \frac{2}{3}\right) \div 4\frac{2}{3}$$

22. List any three rational numbers between $\frac{2}{3}$ and $\frac{3}{5}$. Also arrange them in ascending order.

23. Construct a triangle in which $AB = 6.4$ cm, $\angle A = 45°$ and $\angle C = 75°$.

24. Evaluate using laws of exponents :

$$\frac{7^5 \times 10^7 \times 25}{5^9 \times 14^5}$$

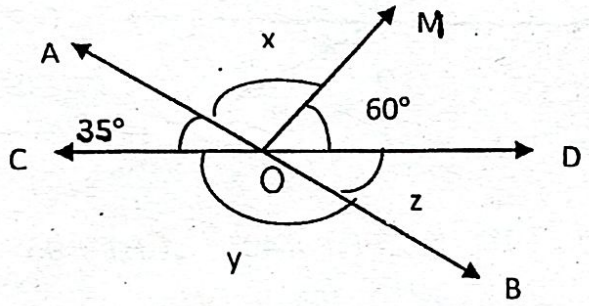
25. Verify that :

$a \div (b + c) \neq (a \div b) + (a \div c)$ for $a = 20, b = -2$ and $c = 4$

26. Divide the sum of $\frac{-13}{5}$ and $\frac{12}{7}$ by the product of $\frac{-31}{7}$ and $\frac{-1}{2}$.

27. A fruitseller bought 300 fruits. Out of these, $\frac{2}{5}$ of the fruits were mangoes and the rest were apples, $\frac{2}{15}$ of the apples were rotten. He sold the good apples at Rs. $4\frac{1}{13}$ each. How much money did he receive on selling the good apples?

28. Find x, y and z if AB and CD are intersecting lines and ray OM stands on line CD.



29. A tree is broken at a height of 5 m from the ground and its top touches the ground at a distance of 12m from the base of the tree. Find the original height of the tree.

30. In ΔXYZ, $XY = XZ$ and XP is the bisector of $\angle YXZ$.

(i) Is $\Delta XPY \cong \Delta XPZ$? Give reasons.

(ii) Is $\angle Y = \angle Z$? Give reasons.

(iii) Is XP a perpendicular bisector of YZ ? Give reasons.