

SECTION A (Each question carries 2 marks)

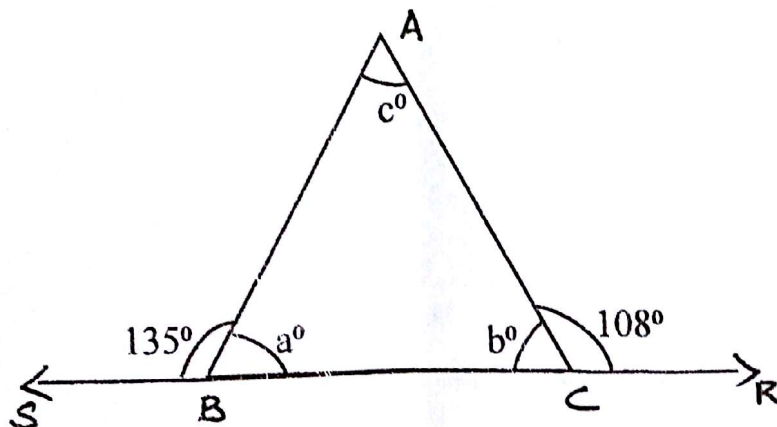
1. Express  $\frac{-64}{36}$  as a rational number with denominator 9.
2. Simplify:  $\frac{10m^{16}}{2m^7}$
3. Express  $\frac{26}{10}$  as a percent
4. If C.P of an article is ₹540, Profit is ₹260, find the S.P
5. Find the complement of  $36^\circ 18'$
6. Find the value of  $(-2)^2 \times (-2)^3$
7. Find the quotient:  $2\frac{2}{3} \div \frac{-4}{3}$

SECTION B (Each question carries 3 marks)

8. Simplify:  $(4a^6)^3 \div (-2a^3)^3$
9. Write a rational number equivalent to  $4.131313\dots$
10. The product of two rational numbers is  $1\frac{3}{8}$ . If one of the two numbers is  $\frac{5}{8}$ , then find the other rational number.
11. 12.5 % of a number is 25, find the number.
12. Arun borrowed ₹12500 from his friend for 3yrs at 8% per year. At the end of 3yrs, how much money will he pay back to his friend?
13. Find the area of a parallelogram whose length of the base is 6.5cm and corresponding altitude is 20cm.

14. Evaluate:  $\frac{3^4 \times 2^5 \times 2}{4^2 \times 9}$

15. Find (giving reasons) the value of a, b, c from the figure.



16. Find the rate percent if the simple interest on ₹275 in 2yrs is ₹22.
17. 480 people (men, women and children) attended a party. Out of them 40% were men, 25% were women and the rest were children. Find the number of children who attended the party.

SECTION C (Each question carries 4 marks)

18. Simplify:

$$1\frac{2}{5} + 4 - 2\frac{1}{10}$$

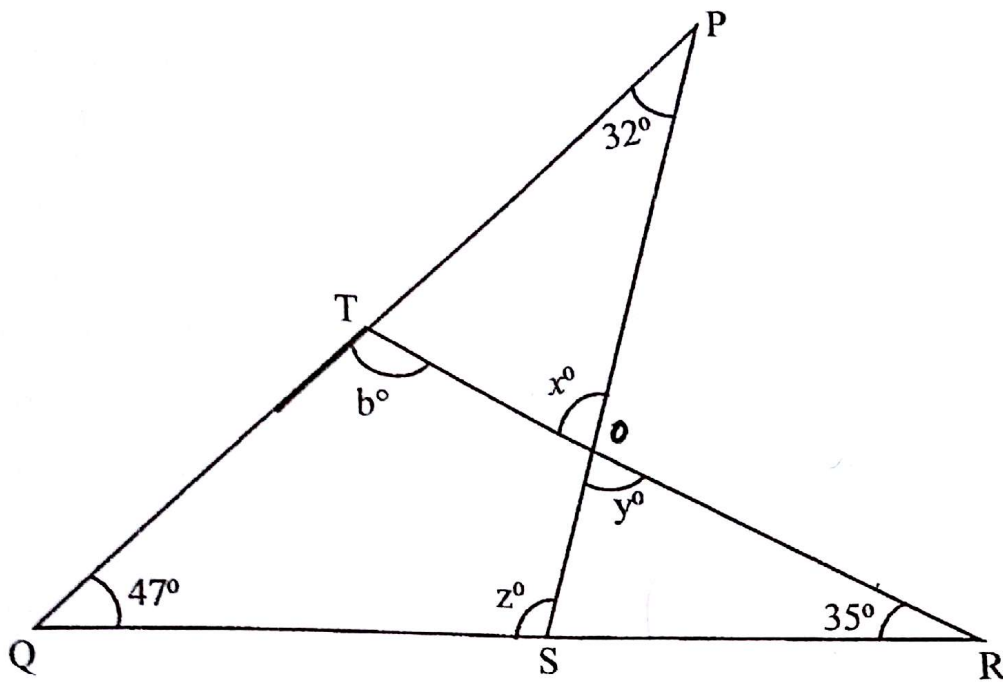
19. A shopkeeper bought 20 bags at ₹260 per bag. He sold 12 of them at ₹70 per bag and the remaining bags at ₹55 per bag. Find his gain or loss. Also find gain % or loss %.

20. One side of a square field is 30m long. Find the cost of levelling it at the rate of ₹0.40 per square metre.

21. A train passes a telegraph post in 40 seconds moving at a speed of 36 km/h. Find the length of the train.

22. The diameter of a circle is 14cm. Find its circumference and area.

23. In the figure, QTP, POS, TOR are straight lines. Find  $x$ ,  $y$ ,  $z$ ,  $b$  (giving reasons).



24. If two trains moving in the opposite direction at 54 km/h and 42 km/h have lengths 105m and 85m respectively, find the time taken by them to pass each other completely.

25. The circumference of a circle is 88m. Calculate the diameter of the circle.

26. ABCD is a square with side 25cm.

$\Delta BCE$  is a right-angled triangle right angled at E.  $BE = 15\text{cm}$ .

Find the area of the shaded portion.

