

MAR THOMA RESIDENTIAL SCHOOL, TIRUVALLA
SECOND TERMINAL EXAMINATION 2019 - '20

CLASS: VII

MATHEMATICS

MARKS: 80

TIME: 2hrs

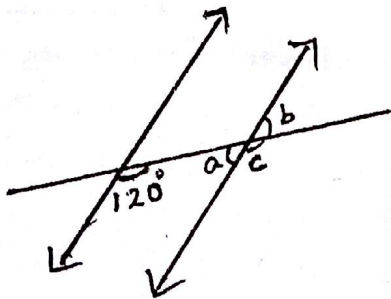
Answer all questions:-

[Questions 1 to 5 carries 2marks each]

1. Write the numerical coefficient in (a) $8m^3$ (b) $-n^4$
2. Find the value of 5% of Rs 320
3. Write the degree of the polynomials :-
(a) $7x^2y^5 - 6xy^4$
(b) $8a^2b^2 + 7ab - 9$
4. The price of apples decreases from Rs 125 per kg to Rs 100 per/kg. Find the percentage decrease in the price
5. Find the complement of $\frac{1}{3}$ of right angle

[Questions 6 to 19 carries 3 marks each]

6. Write the base and exponent of (a) $\left(\frac{2}{7}\right)^3$ (b) $(-3)^5$
7. One of the equal angles of an isosceles triangle is 52° . Find its angle of vertex.
8. If two supplementary angles are in the ratio 2:7, find the angles.
9. Express $\frac{64}{125}$ in exponential form.
10. Identify the monomial, binomial and trinomial:
(1) $9ab^2c - 15ab + 10$
(2) $16x^3 \div 8x$
(3) $15 + 7a + 3$
11. Find the value : (using law of exponents)
(1) $\frac{2^3 \times 2^2 \times 2}{2^4}$
(2) $(3^2)^2$
12. In the given figure $AB \parallel CD$. Find the measure of angles a, b, c. Write reasons.



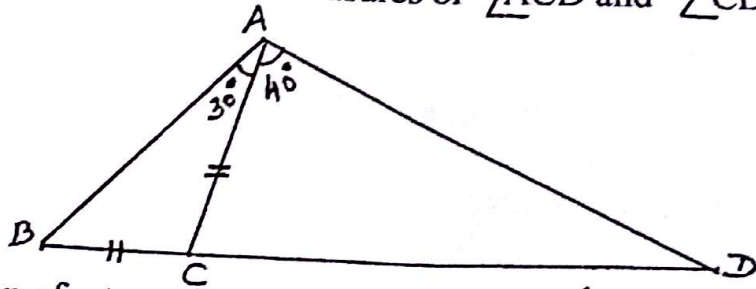
13. If $m:n = 4:9$ and $n:s = 3:7$, Find $m:s$.
14. Add $x + 12y$ and $9x - 14y$.
15. Divide Rs.2700 among A, B, C in the ratio 3: 2:5.
16. Evaluate $(2a^3)^2 \div 2^2 a^5$.
17. Mr. Komal uses 9 litres of water to water 24 flower pots. How many litres of water is required to water 40 flower pots.
18. Express $1\frac{1}{2}$ as a (a) ratio (b) percent (c) decimal.

19. Simplify using law of exponents $\frac{t^4 \times 5^2 \times 125}{t^2 \times 10^2}$.

[Questions 20 to 26 carries 4 Marks each.]

20. Subtract $8xy - 7yz - 18xz$ from $6xy + 3yz + 8xz$.

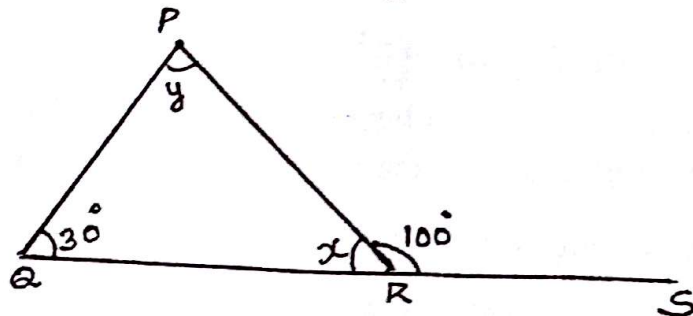
21. From the given figure find the measures of $\angle ACD$ and $\angle CDA$. Write reasons also.



22. The population of a town is 180000, out of which $\frac{1}{3}$ of the whole population are males. Find the number of males and number of females. Find the ratio of the number of females to the whole population.

23. ΔABC is right angled at vertex A. If $AB = 18$ cm. $AC = 24$ cm. calculate the length of BC.

24. Find the value of x and y from the given figure. Write reasons also.



25. 940 people (men, women and children) attended a party. 35% of the people were men, 40% were women and the rest were children. Find the number of children who attended the party.

26. In the figure AB is perpendicular to BC at B. Find :-

- (1). the value of x .
- (2) the complement of angle x .

