



UNICUS OLYMPIADS

Sample Paper

Class 7

Unicus Non-Routine Mathematics Olympiad



Section	Total Questions	Marks per Questions	Total Questions
Classic Section	10	3	30
Scholar Section	10	6	60
Grand Total	20		90

Unicus Non-Routine Mathematics Olympiad (UNRMO)

19. If $1/(2^{1/3} + 2^{-1/3}) = c/d (2^{2/3} + 2^{-2/3} - 1)$ then find the value of d/c .

- a. $2/5$
c. $3/5$

- b. $5/2$
d. $3/4$
-

20. Find the simplest form of the following:

$$1 + \frac{a}{(x-a)} + \frac{bx}{(x-a)(x-b)} + \frac{cx^2}{(x-a)(x-b)(x-c)} + \frac{dx^3}{(x-a)(x-b)(x-c)(x-d)}$$

- a. $x^4/(x-a)(x-b)(x-c)(x-d)$
c. $x^4/(x-a)(x-b)(x+c)(x+d)$

- b. $x^4/(x-a)(x+b)(x+c)(x-d)$
d. $x^3/(x-a)(x+b)(x+c)(x-d)$
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Answer Key

1.	a	2.	b	3.	d	4.	c	5.	a	6.	c	7.	b
8.	a	9.	a	10.	c	11.	c	12.	b	13.	d	14.	b
15.	a	16.	d	17.	a	18.	c	19.	b	20.	a		