



**RAMAGYA SCHOOL, NOIDA**  
**VIII/MATHEMATICS/2018-19**  
**OLYMPIAD PRACTICE WORKSHEET**

**(Concept based)**

1. What is the value of  $(-1)^{-1}$ ?  
(A) 0 (B) -1 (C) 1 (D) None of these
2. What should be added to  $-5/4$  to get  $-1$ ?  
(A)  $-1/4$  (B)  $1/4$  (C) 1 (D)  $-3/4$
3. Which of the following is the value of 'm' in  $6^m / 6^{-3} = 6^5$ ?  
(A) -3 (B) -2 (C) 3 (D) 2
4. Which of the following is the identity element?  
(A) 1 (B) -1 (C) 0 (D) Both A & C
5. Which of the following is the standard form of 0.00001275?  
(A)  $1.275 * 10^{-5}$  (B)  $1.275 * 10^5$  (C)  $127.5 * 10^{-7}$  (D)  $127.5 * 10^7$
6. Which of the following is neither a positive nor a negative rational number?  
(A) 0 (B) 1 (C) Such rational number does not exist (D) None of these

**(Application based)**

7. Which of the following is used as a form of  $5.05 * 10^6$ ?  
(A) 505000 (B) 505000000 (C) 5050000 (D) 50500000
8. 1 micron =  $1/1000000$  m. which of the following is its standard form?  
(A)  $1.1 * 10^{-5}$  (B)  $1.6 * 10^{-5}$  (C)  $0.1 * 10^{-6}$  (D)  $1.0 * 10^{-6}$
9. Which of the following is the product of  $7/8$  and  $-4/21$ ?  
(A)  $-1/6$  (B)  $1/12$  (C)  $-16/63$  (D)  $-147/16$
10.  $[(1/2)^{-1} + (2/3)^2 - (3/4)^0]^{-2}$  is equal to:  
(A)  $81/484$  (B)  $81/169$  (C)  $169/81$  (D)  $16/81$

**HOTS**

11. Multiply  $6/13$  by the reciprocal of  $-7/16$   
(A)  $96/91$  (B)  $90/30$  (C)  $-91/96$  (D)  $90/96$

12. Evaluate  $(1/2)^{-5}$

- (A) 91 (B) 32 (C) 23 (D) 45

13. Find the value of m for which  $5^m \div 5^{-3} = 5^5$ .

- (A) 2 (B) 1 (C) 0 (D) 3

14. Express the following numbers in standard form: 31860000000

- (A)  $3.186 \times 10^7$  (B)  $3.136 \times 10^7$  (C)  $3.136 \times 10^{10}$  (D)  $3.186 \times 10^{10}$

### (Value based)

15. In a stack there are 5 books each of thickness 20 mm and 5 paper sheets each of thickness 0.016mm. What is the total thickness of the stack?

- (A)  $1.0008 \times 10$  mm (B)  $1.0008 \times 10^2$  mm (C)  $1.98 \times 10^5$  mm (D)  $1.0 \times 10^9$  mm

16. In a library, there are 6 books each of thickness 30mm and 6 paper sheets each of thickness 0.018mm. What is the total thickness?

- (A) 18.108mm (B) 8.1008mm (C) 181.1080mm (D) 18.18mm

### Logical Reasoning

17. Pointing to a lady, a man said "The son of her only brother is the brother of my wife" how is the lady related to that man?

- (A) Mother's Sister (B) Sister of Father-in-law (C) Maternal Aunt (D) Grandmother

18. In a certain code, RIPPLE is written as 613382 and LIFE is written as 8192. How is PILLER written in that code?

- (A) 318826 (B) 318286 (C) 618826 (D) 328816

19. 'Match' is related to 'Victory' in the same way as 'Examination' is related to:

- (A) Write (B) Appear (C) Success (D) Attempt

20. Ravi travelled 4 km straight towards South. He turned left and travelled 6 km straight, then turned right and travelled 4 km straight. How far is he from the starting point?

- (A) 8 km (B) 10 km (C) 12 km (D) 18 km