

Class: 7
Subject: Mathematics
Topic: Exponents and Powers
No. of Questions: 20
Duration: 60 Min
Maximum Marks: 60

1. Express 256 as a power 4.
- a. 4^4
 - b. 4^2
 - c. 4^8
 - d. 4^5

Sol: a

2. Express 2048 as a power 2.
- a. 2^{10}
 - b. 2^9
 - c. 2^8
 - d. 2^{11}

Sol: d

3. Which one is greater?
- a. 1^8
 - b. 2^3
 - c. 4^2
 - d. 3^2

Sol: c

4. The value of $(-1)^{55}$ is
- a. 1
 - b. 0
 - c. None of these
 - d. -1

Sol: d

5. Find the value of $(-9)^3 \times (-4)^2$
- 25
 - None of these
 - 36
 - 11664

Sol: d

6. Simplify $7^x \times 7^2$
- 7^{x+3}
 - 7^{x+2}
 - 7^{x-2}
 - None of these

Sol: b

(when same base multiplied their powers add up)

7. Find the value of $(6^0 - 2^0) \times (6^0 + 2^0)$
- 2
 - 1
 - 0
 - 3

Sol: c

8. In $(-9)^4$, the base is _____ and the exponent is 4.
- 9
 - 9
 - 4
 - 4

Sol: b

9. $(a^x)^y =$ _____
- None of these
 - a^x
 - a^y
 - a^{xy}

Sol: d

10. Express 5,223,000,000 in the standard form.
- $5 \times 10^9 + 2 \times 10^8 + 2 \times 10^7 + 3 \times 10^5$
 - $5 \times 10^9 + 2 \times 10^8 + 2 \times 10^7 + 3 \times 10^6$
 - None of these
 - $5 \times 10^9 + 2 \times 10^8 + 2 \times 10^7 + 3 \times 10^4$

Sol: b

11. Simplify and write the answer in exponential form $3^7 \div 3^4$
- 3^3
 - 3^4
 - 3^2
 - 3^7

Sol: a

(when exponents with same base divided than their powers get subtracted)

12. Find m so that $\left(\frac{2}{9}\right)^3 \times \left(\frac{2}{9}\right)^{-6} = \left(\frac{2}{9}\right)^{2m-1}$
- 1
 - 2
 - 0
 - 1

Sol: d

13. Express $(2a)^4$ in exponential form.
- $8a^4$
 - $2a^4$
 - $16a^4$
 - $4a^3$

Sol: c

14. The value of $1/3^2$ is
- a. $1/3$
 - b. $1/9$
 - c. None of these
 - d. 3

Sol: b

15. 10^2 _____ 2^{10}
- a. >
 - b. <
 - c. =
 - d. None of these

Sol: b

16. Expanded form of a^4 is _____.
- a. $a \times a \times a \times a$
 - b. a
 - c. $a \times a$
 - d. $a \times a \times a$

Sol: a

17. simplify: $(2^7 \times 2^8) \div 2^{12}$.
- a. 8
 - b. 4
 - c. 2
 - d. None of these

Sol: a

18. Simplify and write the answer in exponential form. $7^9 \div 7^4$
- a. 7^5
 - b. 7^4
 - c. 7^3
 - d. None of these

Sol: a

19. The standard form of 9641.76 is _____.

- a. 9.64176×10^3
- b. 9.64176×10^2
- c. 9.64176×10^4
- d. None of these

Sol: a

20. Simplify: $\frac{3^2 \times 4^5 \times x^4}{3^4 \times 4^3 \times x^9}$.

- a. 3^2
- b. 4^2
- c. $\frac{4^2}{3^2 \times x^5}$
- d. $\frac{4^2}{3^2 \times x^5}$

Sol: d