

Exponents: Worksheet -1

1. The expanded form of a^3 is: []

- A) $a + a + a$ B) $a \times a \times a$ C) $a - a + a$ D) $a \div a \times a$

2. $a^m \times a^n =$ []

- A) $a^{m \times n}$ B) $(a \times a)^{m \times n}$ C) a^{m+n} D) $(2a)^{m+n}$

3. The value of $2^7 - 7^2 =$ []

- A) 79 B) 0 C) $(-5)^5$ D) $(-5)^9$

4. $\sqrt[n]{a^m} =$ []

- A) $a^{m.n}$ B) $(a^m)^n$ C) $(a^m)^{\frac{1}{n}}$ D) None

5. If $a = 2$; $b = 3$ then $\left(\frac{a}{b}\right)^{-b} =$ []

- A) $\frac{2}{3}$ B) $\frac{4}{9}$ C) $\frac{8}{27}$ D) $\frac{27}{8}$

6. If $n = 2\sqrt{2}$ then $n^4 =$ []

- A) 64 B) 16 C) 4 D) 2

7. $2^{x+2} = 1$ then $x =$ []

- A) 2 B) 5 C) -2 D) -5

8. If $5^{x+2} = 625$ then $5^{x-2} =$ []

- A) 5 B) 25 C) 1 D) -5

9. If $3^x = 270$ then $3^{x-3} =$ []

- A) $\frac{1}{10}$ B) 10 C) 5 D) $\frac{1}{5}$



10. If $\left(\frac{5}{4}\right)^{-5} \times \left(\frac{5}{4}\right)^{-10} = \left(\frac{5}{4}\right)^{3x}$ then $x =$ []

A) 5

B) - 3

C) - 5

D) 3

11. If $2^n = 64$ then $2^{3n-2} =$ []

A) $(16)^2$ B) $(16)^3$ C) $(16)^4$ D) $(16)^5$

12. Which of the following is true? []

A) $5^{10} > 3^{15}$ B) $5^{10} < 3^{15}$ C) $5^{10} = 3^{15}$ D) $5^{10} = 3^{15} = 15^5$ 