

CHAPTER-2 | Power Play

QUIZ
PART-06

1. In the magical pond, lotuses double every:

- A. Hour
- B. Day
- C. Week
- D. Month (B)

Explanation: The number of lotuses becomes twice every day.

2. If the pond is full on day 30, it was half full on:

- A. Day 15
- B. Day 28
- C. Day 29
- D. Day 30 (C)

Explanation: Since lotuses double daily, one day before full it was half full.

3. If fully covered lotuses are 2^{30} , half covered lotuses are:

- A. 2^{15}
- B. 2^{29}
- C. 2^{30}
- D. 2^{31} (B)

Explanation: Half of 2^{30} is 2^{29} .

4. $m^a \times n^a$ is equal to:

- A. $(m + n)^a$
- B. $(mn)^a$
- C. m^{a+n}
- D. n^{a+m} (B)

Explanation: Same powers can be combined by multiplying the bases.

5. $5^3 \times 2^3$ equals:

- A. 10
- B. 100
- C. 1000
- D. 10000 (C)

Explanation: $5^3 \times 2^3 = (5 \times 2)^3 = 10^3 = 1000$

6. $\frac{20^3}{5^3}$ equals:

- A. 16
- B. 64
- C. $48 \times$
- D. 32 (B)

Explanation: $\frac{20^3}{5^3} = \left(\frac{20}{5}\right)^3 = 4^3 = 64$

7. $\frac{10^2 \times 3^2}{15^2}$ equals:

- A. 2
- B. 4
- C. 6
- D. 8 (A)

Explanation: $\frac{10^2 \times 3^2}{15^2} = \left(\frac{30}{15}\right)^2 = 2^2 = 4$

8. m^a/n^a is equal to:

- A. $(m + n)^a$
- B. $(m - n)^a$
- C. $(m/n)^a$
- D. m^{a-n} (C)

Explanation: Same powers can be divided by dividing the bases.

9. If a lotus triples every day, after 4 days one lotus becomes:

- A. 12
- B. 27
- C. 64
- D. 81 (D)

Explanation: $3^4 = 81$.

10. $2^4 \times 3^4$ can be written as:

- A. 5^4
- B. 6^4
- C. 2^{12}
- D. 3^8 (B)

Explanation: $2^4 \times 3^4 = (2 \times 3)^4 = 6^4$