1. find the value of the followings

$$\sqrt{12 + \sqrt{12 + \sqrt{12 + \cdots \ldots \ldots \ldots \ldots \infty}}}$$

a.4

b.3

c.5

d.7

$$2. \sqrt{30 + \sqrt{30 + \sqrt{30 + \cdots \ldots \ldots \ldots \ldots \infty}}}$$

a. 6
b. 5
c. 4
d. 15

3. $\sqrt{56 - \sqrt{56 - \sqrt{56} \ldots \ldots \ldots \ldots \infty}}$

a. 7
b. 8
c. 14
d. 4

4. $\sqrt{3 + \sqrt{3 + \sqrt{3 + \ldots\ldots\ldots\infty}}}$

a. 3

b. 1

c. 4

d. not

5. $\sqrt{5 + \sqrt{5 + \sqrt{5 + \ldots\ldots\ldots\ldots\infty}}}$

a. 5

b. 1

c. $\sqrt{5}$

d. $\dfrac{1+\sqrt{21}}{2}$

6. $\sqrt{5. \sqrt{5. \sqrt{5 \ldots \ldots \ldots \ldots \infty}}}$

a.

b.

c.

d.

7. $\sqrt{15.\sqrt{15.\sqrt{15\sqrt{15 \ldots \ldots \ldots \ldots \infty}}}}$

a.

b.

c.

d.

8. $\sqrt{15.\sqrt{15.\sqrt{15\sqrt{15 \ldots \ldots \ldots \ldots \ldots \infty}}}}$

a. 15
b. 10
c. 5
d. 3

9. $\sqrt{5 \cdot \sqrt{5 \cdot \sqrt{5}}}$

a. 5

b. none

c. $5^{\frac{7}{8}}$

d. $5^{\frac{1}{8}}$

10. $\sqrt{11 \cdot \sqrt{11 \cdot \sqrt{11 \cdot \sqrt{11}}}}$

a. $11^{\frac{15}{16}}$

b. $11^{\frac{7}{8}}$

c. none

d. 11

11. $\sqrt{11 + \sqrt{21 + \sqrt{16}}}$

a.4
b.6
c.8
d.10

12. $\sqrt{54 - \sqrt{19 + \sqrt{33 + \sqrt{9}}}}$

a.7

b.8

c.9

d.10

13. $\sqrt{5 + 2\sqrt{6}}$

a. $\sqrt{3} + \sqrt{2}$

b. $\sqrt{3} - \sqrt{2}$

c. $\sqrt{3} + 2\sqrt{2}$

d. $2\sqrt{3} + \sqrt{2}$

14. $\sqrt{12 + \sqrt{140}}$

a. $\sqrt{7} + \sqrt{5}$

b. $\sqrt{7} - \sqrt{5}$

c. $2\sqrt{7} + \sqrt{5}$

d. $\sqrt{7} + 2\sqrt{5}$

15. $\sqrt{8 - \sqrt{60}}$

a. $\sqrt{5} - \sqrt{3}$

b. $\sqrt{5} + \sqrt{3}$

c. none

d. $2\sqrt{5} - \sqrt{3}$

16. Find the least number among $\sqrt[3]{2}, \sqrt{2}, \sqrt[3]{4}, \sqrt[6]{5},$

a. $\sqrt[3]{2}$

b. $\sqrt[3]{4},$

c. $\sqrt[6]{5},$

d. $\sqrt{2},$

17. Find the greatest number among $\sqrt[3]{5}, \sqrt{4}, \sqrt[3]{6}$ $\sqrt[4]{3}$

a. $\sqrt{4}$

b. $\sqrt[3]{5},$

c. $\sqrt[3]{6}$

d. $\sqrt[4]{3}$

18. Arrange the $\sqrt[4]{10}, \sqrt[3]{6}, \sqrt[4]{3}, \sqrt[6]{5}$ in ascending order.

a. $\sqrt[4]{3}, \sqrt[4]{10}, \sqrt[3]{6}, \sqrt[6]{5}$

b. $\sqrt[6]{5}, \sqrt[4]{3}, \sqrt[4]{10}, \sqrt[3]{6},$

c. $\sqrt[3]{6}, \sqrt[4]{3}, \sqrt[6]{5}, \sqrt[4]{10},$

d. NOT

$[4^3 \times 5^4] \div 4^5 = ?$

(A) 39.0625
(B) 35.6015
(C) 30.0925
(D) 29.0825

If $5^a = 3125$, then the value of 5^{1-3} is

(A) 15

(B) 25

(C) 125

(D) 625

If $10^x = $, then $10^{-8x} = ?$

(A) 8

(B) 16

(C) 256

(D) 312

$(2.4 \times 10^3) \div (8 \times 10^{-2}) = ?$

(A) 3×10^{-5}

(B) 3×10^4

(C) 3×10^5

(D) 30

If $a^x = b$, $b^y = c$ and $c^z = a$, then the value of xyz is

(B) 1

(C) ab

(D) abc

If $2^{n+4} - 2^{n+2} = 3$, then n is equal to

(A) 4

(B) 2

(C) -1

(D) -2

$(?)^{1/4} / 8 = 48/(?)^{3/4}$

(1)344
(2)364
(3)342
(4)not

$$\frac{3}{1^2.2^2} + \frac{5}{2^2.3^2} + \frac{7}{3^2.4^2} + \frac{9}{4^2.5^2} + \frac{11}{5^2.6^2} + \frac{13}{6^2.7^2} + \ldots\ldots\ldots\ldots\ldots\frac{25}{12^2.13^2}$$

is :

(1) $\dfrac{1}{100}$

(2) $\dfrac{99}{100}$

(3) none

(4) $\dfrac{101}{100}$