1. $\dfrac{4}{\sqrt{2\sqrt{2}}} = ?$

A) 1 B) $\sqrt[4]{2}$ C) $2\sqrt{2}$ D) $\sqrt{2}$ E) $2\sqrt[4]{2}$

2. $\dfrac{1}{2-\sqrt{2}} - \dfrac{1}{\sqrt{2}} = ?$

A) –2 B) 1 C) $\sqrt{2}$ D) 2 E) $-\sqrt{2}$

3. $\dfrac{5\sqrt{12}-\sqrt{24}}{\sqrt{3}} = ?$

A) $10-2\sqrt{2}$ B) $5+\sqrt{2}$ C) $\sqrt{6}+4$
D) $10-\sqrt{2}$ E) $\sqrt{10}-\sqrt{2}$

4. $25\cdot\sqrt{\dfrac{1}{5}\cdot\sqrt[3]{5}} = ?$

A) 5 B) $\sqrt{5}$
C) $5\cdot\sqrt[3]{5^2}$ D) $5\cdot\sqrt{5}$ E) $\sqrt[3]{5}$

5. $\dfrac{5}{4-\sqrt{6}} - \dfrac{\sqrt{6}}{2} = ?$

A) 0 B) 1 C) 2 D) $\sqrt{6}$ E) $2\sqrt{6}$

6. $\sqrt[5]{\dfrac{1}{8}\sqrt{2}} = ?$

A) 2^{-3} B) $2^{3/2}$ C) $2^{-3/2}$ D) $2^{1/2}$ E) $2^{-1/2}$

7. Which of the following is a solution for the equation $x^x = \sqrt{x}$

A) 4 B) 2 C) 0 D) 0.5 E) 0.25

8. $\dfrac{1}{2-\sqrt{2}} + \dfrac{1}{2+\sqrt{2}} = ?$

A) –2 B) $-\sqrt{2}$ C) $\sqrt{2}$ D) 2 E) 4

9. $\dfrac{\sqrt{2}+1}{\sqrt{2}-1} + \dfrac{1-\sqrt{2}}{1+\sqrt{2}} = ?$

A) 0 B) 1 C) 6 D) $2\sqrt{2}$ E) $4\sqrt{2}$

10. $\dfrac{1}{1-\dfrac{1}{\sqrt{2}}} - \dfrac{2}{2+\sqrt{2}} = ?$

A) 0 B) $\sqrt{2}$ C) 2 D) $2\sqrt{2}$ E) 4

11. $\dfrac{1}{\sqrt{3}-\sqrt{2}} + \dfrac{2}{2+\sqrt{2}} - \dfrac{3}{\sqrt{3}} = ?$

A) $2\sqrt{3}$ B) 1 C) 2
D) $2\cdot(\sqrt{3}+1)$ E) $2\cdot(1-\sqrt{2})$

12. $\dfrac{\sqrt[3]{2}\cdot\sqrt[4]{8}\cdot\sqrt[6]{4}}{2\cdot\sqrt[12]{2}} = ?$

A) $\sqrt[4]{2}$ B) $\dfrac{1}{\sqrt[3]{2}}$ C) $\dfrac{1}{\sqrt[4]{2}}$ D) $\sqrt{2}$ E) $\sqrt[3]{2}$

13. $\left(\dfrac{\sqrt{6}+\sqrt{14}}{\dfrac{\sqrt{3}}{\sqrt{7}}+1}\right)^2 = ?$

A) $\dfrac{2}{7}$ B) 2 C) 3 D) 7 E) 14

14. $\sqrt{1+\sqrt{5+\sqrt{x}}} = 2$ then x is …

A) 9 B) 16 C) 25 D) 36 E) 49

15. $\dfrac{\sqrt{42+\sqrt{42+\sqrt{42+\sqrt{49}}}}}{\sqrt[4]{\dfrac{5}{2}\sqrt[3]{\dfrac{4}{25}\sqrt{\dfrac{4}{25}}}}} = ?$

A) 7 B) 8 C) 9 D) 42 E) $\sqrt[8]{\dfrac{5}{2}}$

16. $\sqrt{12-2\sqrt{35}} = ?$

A) $\sqrt{7}-\sqrt{5}$ B) $\sqrt{7}+\sqrt{5}$ C) $-\sqrt{11}$

D) $-2\sqrt{11}$ E) $3\sqrt{11}$

17. $\dfrac{2}{\sqrt{10-4\sqrt{6}}} = ?$

A) $\sqrt{6}-\sqrt{2}$ B) $\sqrt{6}+\sqrt{2}$ C) $\sqrt{6}+2$
D) $\sqrt{6}+4$ E) $\sqrt{7}-\sqrt{2}$

18. $\sqrt{4+\sqrt{9-4\sqrt{2}}} = ?$

A) $\sqrt{3}$ B) $\sqrt{2}$ C) $\sqrt{2}+1$
D) $\sqrt{3}+1$ E) $2\sqrt{3}+1$