

$$\begin{aligned} 1. \quad & \sqrt{(-3)^2} + \sqrt[3]{(-2)^3} - \sqrt[4]{(-1)^4} \\ & = |-3| + (-2) - |-1| \\ & = 3 - 2 - 1 \\ & = 3 - 3 \\ & = 0 \end{aligned}$$

CEVAP: C

$$\begin{aligned} 2. \quad & \frac{\sqrt{20} \cdot \sqrt{5}}{\sqrt{2}} = \frac{\sqrt{20 \cdot 5}}{\sqrt{2}} \\ & = \frac{\sqrt{100}}{\sqrt{2}} \\ & = \frac{10 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} \\ & = \frac{10\sqrt{2}}{2} \\ & = 5\sqrt{2} \text{ dir.} \end{aligned}$$

CEVAP: B

$$\begin{aligned} 3. \quad & \sqrt{5} + \sqrt{45} - \sqrt{20} \\ & = \sqrt{5} + \sqrt{9 \cdot 5} - \sqrt{4 \cdot 5} \\ & = \sqrt{5} + 3\sqrt{5} - 2\sqrt{5} \\ & = 2\sqrt{5} \text{ dir.} \end{aligned}$$

CEVAP: D

$$\begin{aligned} 4. \quad & \frac{3\sqrt{125} + 2\sqrt{5}}{\sqrt{500}} = \frac{15\sqrt{5} + 2\sqrt{5}}{10\sqrt{5}} \\ & = \frac{17\sqrt{5}}{10\sqrt{5}} \\ & = 1,7 \text{ dir.} \end{aligned}$$

CEVAP: D

$$\begin{aligned} 5. \quad & \sqrt{7^2} + \sqrt[3]{8^3} + \sqrt[4]{9^4} \\ & = 7 + 8 + 9 \\ & = 24 \text{ dür.} \end{aligned}$$

CEVAP: B

$$\begin{aligned} 6. \quad & \frac{\sqrt{3} + \sqrt{27} + \sqrt{48}}{2\sqrt{5} + \sqrt{80} + \sqrt{20}} \cdot \sqrt{5} \\ & = \frac{\sqrt{3} + 3\sqrt{3} + 4\sqrt{3}}{2\sqrt{5} + 4\sqrt{5} + 2\sqrt{5}} \cdot \sqrt{5} \\ & = \frac{8\sqrt{3}}{8\sqrt{5}} \cdot \sqrt{5} = \sqrt{3} \text{ dür.} \end{aligned}$$

CEVAP: B

$$\begin{aligned}
7. \quad & \sqrt{64} - \sqrt{0,64} + \sqrt{1,96} \\
&= 8 - \sqrt{\frac{64}{100}} + \sqrt{\frac{196}{100}} \\
&= 8 - \frac{8}{10} + \frac{14}{10} \\
&= \frac{80 - 8 + 14}{10} \\
&= \frac{86}{10} \\
&= 8,6
\end{aligned}$$

CEVAP: E

$$\begin{aligned}
8. \quad & \sqrt{3,6} - \sqrt{2,5} + \sqrt{19,6} = k \cdot \sqrt{10} \\
& \sqrt{\frac{36}{10}} - \sqrt{\frac{25}{10}} + \sqrt{\frac{196}{10}} = k \cdot \sqrt{10} \\
& \frac{6}{\sqrt{10}} - \frac{5}{\sqrt{10}} + \frac{14}{\sqrt{10}} = k \cdot \sqrt{10} \\
& \frac{15}{\sqrt{10}} = k \cdot \sqrt{10} \\
& 15 = k \cdot 10 \\
& k = \frac{15}{10} = \frac{3}{2} \text{ dir.}
\end{aligned}$$

CEVAP: B

$$\begin{aligned}
9. \quad & \frac{2\sqrt{80} + \sqrt{245} - 3\sqrt{20}}{4\sqrt{5} + 3\sqrt{45}} \\
&= \frac{8\sqrt{5} + 7\sqrt{5} - 6\sqrt{5}}{4\sqrt{5} + 9\sqrt{5}} \\
&= \frac{9\sqrt{5}}{13\sqrt{5}} \\
&= \frac{9}{13} \text{ bulunur.}
\end{aligned}$$

CEVAP: C

$$\begin{aligned}
10. \quad & \sqrt{0,04} - \sqrt{0,01} + \sqrt{1,21} \\
&= \sqrt{\frac{4}{100}} - \sqrt{\frac{1}{100}} + \sqrt{\frac{121}{100}} \\
&= \frac{2}{10} - \frac{1}{10} + \frac{11}{10} \\
&= \frac{12}{10} \\
&= 1,2 \text{ dir.}
\end{aligned}$$

CEVAP: C

$$\begin{aligned}
11. \quad & 2\sqrt{8} - \frac{4}{\sqrt{2}} + 9\sqrt{\frac{2}{9}} \\
&= 4\sqrt{2} - \frac{4 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} + \frac{9 \cdot \sqrt{2}}{\sqrt{9}} \\
&= 4\sqrt{2} - 2\sqrt{2} + \frac{9}{3}\sqrt{2} \\
&= 4\sqrt{2} - 2\sqrt{2} + 3\sqrt{2} \\
&= 5\sqrt{2} \text{ dir.}
\end{aligned}$$

CEVAP: A



$$\begin{aligned}
 12. \quad & \frac{1}{\sqrt{0,16}} - \frac{0,3}{\sqrt{0,25}} + \frac{\sqrt{0,09}}{0,5} \\
 &= \frac{1}{0,4} - \frac{0,3}{0,5} + \frac{0,3}{0,5} \\
 &= \frac{1}{0,4} \\
 &= \frac{1}{\frac{2}{5}} \\
 &= \frac{5}{2} \text{ dir.}
 \end{aligned}$$

CEVAP: D

$$\begin{aligned}
 13. \quad & \frac{\sqrt{180} + \sqrt{125}}{x} = \sqrt{5} \\
 & \frac{6\sqrt{5} + 5\sqrt{5}}{x} = \sqrt{5} \\
 & \frac{11\sqrt{5}}{x} = \sqrt{5} \\
 & x = 11 \text{ bulunur.}
 \end{aligned}$$

CEVAP: E

$$14. \quad \sqrt{20} = 2\sqrt{5} \text{ olduğundan } \sqrt{5} \text{ in yaklaşık de-} \\
 \text{ğeri bilinirse } \sqrt{20} \text{ nin yaklaşık değeri bulu-} \\
 \text{nabilir.}$$

CEVAP: C

$$\begin{aligned}
 15. \quad & \frac{8\sqrt{15} - 30\sqrt{3}}{2\sqrt{60} - 3\sqrt{75}} = \frac{8\sqrt{15} - 30\sqrt{3}}{4\sqrt{15} - 15\sqrt{3}} \\
 &= \frac{2(4\sqrt{15} - 15\sqrt{3})}{(4\sqrt{15} - 15\sqrt{3})} \\
 &= 2 \text{ dir.}
 \end{aligned}$$

CEVAP: A

$$\begin{aligned}
 16. \quad & \frac{\sqrt{2,25} - \sqrt[3]{0,008}}{\sqrt[3]{0,027} - \sqrt{0,04}} = \frac{\sqrt{\frac{225}{100}} - \sqrt[3]{\frac{8}{1000}}}{\sqrt[3]{\frac{27}{1000}} - \sqrt{\frac{4}{100}}} \\
 &= \frac{\frac{15}{10} - \frac{2}{10}}{\frac{3}{10} - \frac{2}{10}} \\
 &= \frac{13}{10} \\
 &= 13 \text{ bulunur.}
 \end{aligned}$$

CEVAP: E



$$17. \frac{\sqrt{24} + \sqrt{18}}{\sqrt{8} + \sqrt{6}} = \frac{\sqrt{3}(\sqrt{8} + \sqrt{6})}{(\sqrt{8} + \sqrt{6})}$$

$$= \sqrt{3} \text{ dür.}$$

CEVAP: D

$$19. (\sqrt{3} - 1)^4 \cdot (\sqrt{3} + 1)^3$$

$$= (\sqrt{3} - 1) \cdot (\sqrt{3} - 1)^3 \cdot (\sqrt{3} + 1)^3$$

$$= (\sqrt{3} - 1) \cdot [(\sqrt{3} - 1) \cdot (\sqrt{3} + 1)]^3$$

$$= (\sqrt{3} - 1) \cdot (2)^3$$

$$= 8 \cdot (\sqrt{3} - 1) \text{ dir.}$$

CEVAP: A

$$18. \frac{\sqrt{0,81} - \sqrt{0,36}}{\sqrt{0,9}} = \frac{\sqrt{\frac{81}{100}} - \sqrt{\frac{36}{100}}}{\sqrt{\frac{9}{100}}}$$

$$= \frac{0,9 - 0,6}{\frac{3}{\sqrt{10}}}$$

$$= 0,3 \cdot \frac{\sqrt{10}}{3}$$

$$= \frac{\sqrt{10}}{10} \text{ dur.}$$

CEVAP: C

$$20. \frac{\sqrt{72} - \sqrt{18}}{\sqrt{75} - \sqrt{48}} = \frac{6\sqrt{2} - 3\sqrt{2}}{5\sqrt{3} - 4\sqrt{3}}$$

$$= \frac{3\sqrt{2}}{\sqrt{3}}$$

$$= \frac{3\sqrt{2} \cdot \sqrt{3}}{\sqrt{3} \cdot \sqrt{3}}$$

$$= \frac{\cancel{3}\sqrt{6}}{\cancel{3}}$$

$$= \sqrt{6}$$

CEVAP: B

