

CURSO MENTOR

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Tema: Radiciação IV

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Q1. Racionalize os denominadores a seguir:

1. $\frac{3}{\sqrt{2}}$
2. $\frac{5}{-\sqrt{2}}$
3. $\frac{4}{\sqrt[3]{2}}$
4. $\frac{3}{\sqrt[3]{-2}}$
5. $\frac{1}{\sqrt[4]{4}}$
6. $\frac{27}{\sqrt[5]{9}}$
7. $\frac{7}{\sqrt[n]{2}}$
8. $\frac{5}{\sqrt[n]{2^m}}$
9. $\frac{\sqrt{2}}{\sqrt{3}}$
10. $\frac{\sqrt{3}}{\sqrt[3]{-3}}$
11. $\frac{\sqrt{3} + 1}{\sqrt{3}}$
12. $\frac{\sqrt{2} + \sqrt{3}}{\sqrt{5}}$
13. $\frac{1}{\sqrt{2} + 1}$
14. $\frac{3}{\sqrt{3} - 2}$
15. $\frac{\sqrt{2}}{\sqrt{5} - 2}$
16. $\frac{\sqrt[3]{3}}{-1 - \sqrt{2}}$
17. $\frac{\sqrt{2} + 1}{\sqrt{2} - 1}$
18. $\frac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}}$
19. $\frac{1}{\sqrt{2} + \sqrt{3} + 1}$
20. $\frac{\sqrt{2}}{\sqrt{3} - \frac{1}{\sqrt{2}}}$
21. $\frac{1}{(\sqrt{2} + 1)(\sqrt{3} + 1)}$
22. $\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{3}} + \frac{1}{\sqrt{5}}$
23. $\frac{\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{3}}}{\frac{1}{\sqrt{5}} + \frac{1}{\sqrt{7}}}$
24. $\frac{\sqrt{2} + \sqrt{3}}{\sqrt{2} - \sqrt{3} + \sqrt{5}}$
25. $\frac{\sqrt{2} + \sqrt{3} + \sqrt{5}}{\sqrt{2} - \sqrt{3} - \sqrt{5}}$
26. $\frac{1}{\sqrt[3]{2} - 1}$
27. $\frac{1}{\sqrt[3]{2} + \sqrt[3]{4}}$
28. $\frac{\sqrt[3]{2}}{\sqrt[3]{7} - \sqrt[3]{2}}$
29. $\frac{1}{\sqrt{\sqrt{2} + 1}}$
30. $\frac{\sqrt{2}}{\sqrt{5 - \sqrt{2}}}$
31. $\frac{\sqrt[3]{2}}{\sqrt[3]{1 + \sqrt{2}}}$
32. $\frac{\sqrt{2}}{\sqrt[4]{2} - 1}$
33. $\frac{1}{\sqrt{1 + \sqrt{2} + \sqrt{3}}}$
34. $\frac{\sqrt{2}}{\sqrt{2} - \sqrt[4]{2}}$
35. $\frac{\sqrt{2}}{\sqrt[4]{2} - \sqrt[8]{2}}$

GABARITO

Q1.

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|-------------------------------------|--|--|
| 1. $\frac{3\sqrt{2}}{2}$ | 13. $\sqrt{2} - 1$ | 25. $-\frac{(2+\sqrt{10})\sqrt{6}}{6}$ |
| 2. $-\frac{5\sqrt{3}}{3}$ | 14. $-3(\sqrt{3} + 2)$ | 26. $\sqrt[3]{4} + \sqrt[3]{2} + 1$ |
| 3. $2\sqrt[3]{4}$ | 15. $\sqrt{10} - 2\sqrt{2}$ | 27. $\frac{\sqrt[3]{4}-2+2\sqrt[3]{2}}{6}$ |
| 4. $-\frac{3\sqrt[3]{4}}{2}$ | 16. $\sqrt[3]{3}(1 - \sqrt{2})$ | 28. $\frac{\sqrt[3]{98}+\sqrt[3]{28}+2}{5}$ |
| 5. $\frac{\sqrt[4]{4}}{2}$ | 17. $3 + 2\sqrt{2}$ | 29. $\sqrt{\sqrt{2} + 1}(\sqrt{2} - 1)$ |
| 6. $9\sqrt[5]{27}$ | 18. $5 + 2\sqrt{6}$ | 30. $\frac{\sqrt{10-\sqrt{2}}(5+\sqrt{2})}{23}$ |
| 7. $\frac{7\sqrt[2]{2^{n-1}}}{2}$ | 19. $\frac{(\sqrt{2}+\sqrt{3}-1)(\sqrt{6}-2)}{4}$ | 31. $(\sqrt{2} - 1)\sqrt[3]{6 + 4\sqrt{2}}$ |
| 8. $\frac{5\sqrt[2]{2^{n-m}}}{2}$ | 20. $\frac{2(\sqrt{6}+1)}{5}$ | 32. $\sqrt{2}(\sqrt[4]{2} + 1)(\sqrt{2} - 1)$ |
| 9. $\frac{\sqrt{6}}{3}$ | 21. $\frac{(\sqrt{2}-1)(\sqrt{3}-1)}{2}$ | 33. $\frac{\sqrt{\sqrt{2}+2+\sqrt{6}}(1+\sqrt{2}-\sqrt{3})}{4}$ |
| 10. $\sqrt[6]{3}$ | 22. $\frac{15\sqrt{2}+10\sqrt{3}+6\sqrt{5}}{30}$ | 34. $\frac{\sqrt{2}(\sqrt{2}+\sqrt[4]{2})(2+\sqrt{2})}{6}$ |
| 11. $\frac{3+\sqrt{3}}{3}$ | 23. $\frac{35(\sqrt{2}+\sqrt{3})(\sqrt{7}-\sqrt{5})}{12}$ | 35. $\frac{\sqrt{2}(\sqrt[8]{4}+\sqrt[8]{2})(\sqrt[4]{4}+\sqrt[4]{2})(2+\sqrt{2})}{6}$ |
| 12. $\frac{\sqrt{10}+\sqrt{15}}{5}$ | 24. $\frac{\sqrt{6}(\sqrt{2}+\sqrt{3})(\sqrt{2}-\sqrt{3}-\sqrt{5})}{12}$ | |