



COLEGIO GENERAL GUSTAVO ROJAS PINILLA I.E.D.

"Paz, justicia, libertad, creatividad"

PEI: Creatividad y Saber: Expresiones del Talento Gustavista

Curso 1103 - 1° PERIODO AP3: Exponentes y raíces

I. Resuelve cada expresión.

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|---------------------------------|---|
| 1. (a) -3^2 | (b) $(-3)^2$ |
| 2. (a) $5^4 \cdot 5^{-2}$ | (b) $\frac{10^7}{10^4}$ |
| 3. (a) $(\frac{5}{3})^0 2^{-1}$ | (b) $\frac{2^{-3}}{3^0}$ |
| 4. (a) $(-\frac{2}{3})^{-3}$ | (b) $(\frac{3}{2})^{-2} \cdot \frac{9}{16}$ |
| 5. (a) $\sqrt{16}$ | (b) $\sqrt[4]{16}$ |
| 6. (a) $\sqrt{64}$ | (b) $\sqrt[3]{-64}$ |
| 7. (a) $\sqrt{\frac{4}{9}}$ | (b) $\sqrt[4]{256}$ |
| 8. (a) $\sqrt{7}\sqrt{28}$ | (b) $\frac{\sqrt{48}}{\sqrt{3}}$ |
| 9. (a) $(\frac{4}{9})^{-1/2}$ | (b) $(-32)^{2/5}$ |
| 10. (a) $1024^{-0.1}$ | (b) $(-\frac{27}{8})^{2/3}$ |

II. Resuelve

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|--------------------------------------|------------------------------------|
| 11. $\sqrt[5]{96} + \sqrt[5]{3}$ | 13. $\sqrt[4]{48} - \sqrt[4]{3}$ |
| 12. $\sqrt{75} + \sqrt{48}$ | 14. $\sqrt[3]{2y^4} - \sqrt[3]{y}$ |
| 15. (a) $x^8 x^2$ | (b) $(3y^2)(4y^5)$ |
| 16. (a) $x^{-5} x^3$ | (b) $w^{-2} w^{-4} w^6$ |
| 17. (a) $\frac{y^{10} y^0}{y^7}$ | (b) $\frac{x^6}{x^{10}}$ |
| 18. (a) $\frac{z^2 z^4}{z^3 z^{-1}}$ | (b) $(2y^2)^3$ |

III. Resuelve y no dejes exponentes negativos

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| 19. (a) $(5x^2 y^3)(3x^2 y^5)^4$ | (b) $(2a^3 b^2)^2 (5a^2 b^5)^3$ |
| 20. (a) $(s^{-2} t^2)^2 (s^2 t)^3$ | (b) $(2u^2 v^3)^3 (3u^{-3} v)^2$ |
| 21. (a) $\frac{6y^3 z}{2yz^2}$ | (b) $\frac{(xy^2 z^3)^4}{(x^2 y^2 z)^3}$ |
| 22. (a) $\frac{2x^3 y^4}{x^5 y^3}$ | (b) $\frac{(2v^3 w)^2}{v^3 w^2}$ |
| 23. (a) $(\frac{a^2}{b})^5 (\frac{a^3 b^2}{c^3})^3$ | (b) $\frac{(u^{-1} v^2)^2}{(u^3 v^{-2})^3}$ |
| 24. (a) $(\frac{x^4 z^2}{4y^5}) (\frac{2x^3 y^2}{z^3})^2$ | (b) $\frac{(rs^2)^3}{(r^{-3} s^2)^2}$ |
| 25. (a) $\frac{8a^3 b^{-4}}{2a^{-5} b^5}$ | (b) $(\frac{y}{5x^{-2}})^{-3}$ |
| 26. (a) $\frac{5xy^{-2}}{x^{-1} y^{-3}}$ | (b) $(\frac{2a^{-1} b}{a^2 b^{-3}})^{-3}$ |
| 27. (a) $(\frac{3a}{b^3})^{-1}$ | (b) $(\frac{q^{-1} r^{-1} s^{-2}}{r^{-5} s q^{-8}})^{-1}$ |

IV. Simplifica y no dejes exponentes negativos

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| 28. $\sqrt[5]{x^{10}}$ | 30. $\sqrt[3]{a^2 b} \sqrt[3]{64a^4 b}$ |
| 29. $\sqrt[3]{x^3 y^6}$ | 31. $\sqrt[4]{x^4 y^2 z^2}$ |
| 32. (a) $\sqrt[6]{y^5} \sqrt[3]{y^2}$ | (b) $(5\sqrt[3]{x})(2\sqrt[4]{x})$ |
| 33. (a) $\sqrt[4]{b^3} \sqrt{b}$ | (b) $(2\sqrt{a})(\sqrt[3]{a^2})$ |
| 34. (a) $\sqrt{4st^3} \sqrt[6]{s^3 t^2}$ | (b) $\frac{\sqrt[4]{x^7}}{\sqrt[4]{x^3}}$ |
| 35. (a) $\sqrt[5]{x^3 y^2} \sqrt[10]{x^4 y^{16}}$ | (b) $\frac{\sqrt[3]{8x^2}}{\sqrt{x}}$ |

NOTA: En pantalla se presentará el solucionario para que podamos verificar las soluciones.



¡Me encanta aprender matemáticas!