

## LOI DES EXPOSANTS – Révision 2 - Corrigé

Simplifie sous forme d'une seule puissance en appliquant les lois des exposants.

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|-------------------------|-------|------------------------|----------|-----------------------|-------|---------------------------|-----------|
| 1. $3 \times 3^7$       | $3^8$ | 2. $5^{10} \div 5^4$   | $5^6$    | 3. $7^3 \times 7^1$   | $7^4$ | 4. $9^3 \times 9^3$       | $9^6$     |
| 5. $2^{20} \div 2^{18}$ | $2^2$ | 6. $4^0 \times 4^2$    | $4^2$    | 7. $6^8 \div 6^8$     | $6^0$ | 8. $8^5 \times 8^4$       | $8^9$     |
| 9. $7^4 \div 7^1$       | $7^3$ | 10. $4^{15} \div 4^6$  | $4^9$    | 11. $5^4 \div 5$      | $5^3$ | 12. $13^{12} \times 13^4$ | $13^{16}$ |
| 13. $(9^4)^2$           | $9^8$ | 14. $10^0 \times 10^7$ | $10^7$   | 15. $2^{10} \div 2^3$ | $2^7$ | 16. $(5^4)^3$             | $5^{12}$  |
| 17. $(4^0)^5$           | $4^0$ | 18. $1^3 \times 1^8$   | $1^{11}$ | 19. $9^5 \div 9$      | $9^4$ | 20. $2^{10} \times 2^3$   | $2^{13}$  |

Simplifie en appliquant les lois des exposants et évalue.

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|---|---|---|--|
| 21. $(7^2)^3$<br>$7^6 = 117649$   | 22. $4^5 \times 4^6$<br>$4^7 = 16384$   | 23. $5^3 \times 5^2$<br>$5^5 = 3125$  | 24. $\frac{6^5}{6^2}$<br>$6^3 = 216$   |
| 25. $\left(\frac{2}{3}\right)^3$<br>$\left(\frac{2^3}{3^3}\right) = \frac{8}{27}$ | 26. $\frac{3^2}{5}$<br>$\frac{9}{5}$  | 27. $\left(\frac{1}{4}\right)^2$<br>$\left(\frac{1^2}{4^2}\right) = \frac{1}{16}$ | 28. $\left(\frac{3}{2}\right)^3$<br>$\left(\frac{3^3}{2^3}\right) = \frac{27}{8}$                |
| 29. $\frac{4^2}{2}$<br>$\frac{16}{2}$   | 30. $\left(\frac{2}{5}\right)^2$<br>$\left(\frac{2^2}{5^2}\right) = \frac{4}{25}$ | 31. $\left(\frac{1}{3}\right)^3$<br>$\left(\frac{1^3}{3^3}\right) = \frac{1}{27}$ | 32. $\left(\frac{2}{8}\right)^2$<br>$\left(\frac{2^2}{8^2}\right) = \frac{4}{64} = \frac{1}{16}$ |
| 33. $(3 \times 4)^2$<br>$3^2 \times 4^2 = 144$                                    | 34. $(3 \times 2)^3$<br>$3^3 \times 2^3 = 216$                                    | 35. $(2 \times 4)^2$<br>$2^2 \times 4^2 = 64$                                     | 36. $(2 \times 5)^3$<br>$2^3 \times 5^3 = 1000$  |
| 37. $(5 \times 6)^2$<br>$5^2 \times 6^2 = 900$                                    | 38. $(7 \times 1)^3$<br>$7^3 \times 1^3 = 343$                                    | 39. $(3 \times 5)^2$<br>$3^2 \times 5^2 = 225$                                    | 40. $(5 \times 4)^2$<br>$5^2 \times 4^2 = 400$   |

Trouve l'exposant manquant

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|-----------------------------------|------------------------------|---------------------------|
| 41. $(2^2)^2 = 16$                | 42. $5^2 \times 5^1 = 125$   | 43. $3^8 \div 3^5 = 27$   |
| 44. $8^0 \times 8^2 = 64$         | 45. $(7^0)^2 = 1$            | 46. $4^8 \div 4^6 = 16$   |
| 47. $10^2 \times 10^3 = 100\,000$ | 48. $(10^3)^2 = 1\,000\,000$ | 49. $2^2 \times 2^3 = 32$ |