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	Main Properties of Exponents and Radicals		Applications:
1	$a^m = a^{n+m}$	1	$3^5 = 3^{4+5} = 3^9$
2	$(a \cdot b)^n = a^n b^n$	2	$(2 \cdot 3)^5 = 2^5 3^5 = 32 \cdot 243 = 7776$
3	$(a^m)^n = a^{mn}$	3	$(5^2)^3 = 5^{2 \cdot 3} = 5^6 = 15625$
4	$a^{-n} = \dfrac{1}{a^n}$	4	$(7)^{-3} = \dfrac{1}{7^3} = \dfrac{1}{343}$
5	$\left(\dfrac{a}{b}\right)^n = \dfrac{a^n}{b^n}$	5	$\left(\dfrac{7}{8}\right)^2 = \dfrac{7^2}{8^2} = \dfrac{49}{64}$
6	$\dfrac{a^m}{a^n} = a^{m-n}$	6	$\dfrac{9^7}{9^5} = 9^{7-5} = 9^2 = 81$
7	$a^0 = 1$	7	$5x^0 + (3\,y^0) + 102^0 = 5 \cdot 1 + 3 \cdot 1 + 1 = 9$
8	$\sqrt[n]{ab} = \sqrt[n]{a} \cdot \sqrt[n]{b}$	8	$\sqrt[4]{2b} = \sqrt[4]{2} \cdot \sqrt[4]{b}$
9	$\sqrt[n]{\dfrac{a}{b}} = \dfrac{\sqrt[n]{a}}{\sqrt[n]{b}}$	9	$\sqrt[7]{\dfrac{x^3}{y^7}} = \dfrac{\sqrt[7]{x^3}}{\sqrt[7]{y^7}} = \dfrac{\sqrt[7]{x^3}}{y}$
10	$\sqrt[n]{\left(\dfrac{a}{b}\right)^m} = \left(\dfrac{a}{b}\right)^{\frac{m}{n}}$	10	$\sqrt[8]{\left(\dfrac{a}{b}\right)^7} = \left(\dfrac{a}{b}\right)^{\frac{7}{8}}$
11	$\sqrt[n]{a^n} = a$	11	$\sqrt[4]{6^4} = \sqrt[4]{1296} = 6$
12	$(a)^{\frac{1}{n} \cdot n} = a$	12	$(19)^{\frac{1}{8} \cdot 8} = 19^1 = 19$