



Math worksheet on 'Radicals - Convert Cube Root, Values and Variables, from Exponents - Positive (Level 2)'. Part of a broader unit on 'Radicals - Simplifying Advanced'

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1 Convert the fractional exponent to a radical

$$11^{\frac{1}{3}} \cdot x^{\frac{2}{3}} \cdot z^{\frac{2}{3}}$$

a	$\sqrt[3]{13x^2z^4}$	b	$\sqrt[3]{11x^3z}$
c	$2\sqrt[3]{11xz^4}$	d	$2\sqrt[3]{12xz^4}$
e	$\sqrt[3]{7xz^3}$	f	$\sqrt[3]{11x^2z^2}$

2 Convert the fractional exponent to a radical

$$5^{\frac{1}{3}} \cdot d^{\frac{2}{3}} \cdot r^{\frac{5}{3}}$$

a	$r\sqrt[3]{7dr}$	b	$\sqrt[3]{5d^2r^5}$	c	$2r^2\sqrt[3]{8dr}$	d	$r^2\sqrt[3]{5d^4r}$	e	$2r\sqrt[3]{2dr^3}$	f	$r^3\sqrt[3]{4d^4r}$
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3 Convert the fractional exponent to a radical

$$3^{\frac{1}{3}} \cdot m^{\frac{4}{3}} \cdot n^{\frac{4}{3}}$$

a	$3m^2n^3\sqrt[3]{mn}$	b	$mn^2\sqrt[3]{6mn^2}$
c	$3mn^2\sqrt[3]{m^3n}$	d	$\sqrt[3]{3m^4n^4}$
e	$mn^3\sqrt[3]{6mn}$	f	$3mn\sqrt[3]{m^2n^2}$

4 Convert the fractional exponent to a radical

$$11^{\frac{1}{3}} \cdot x^{\frac{4}{3}} \cdot p^{\frac{1}{3}}$$

a	$x\sqrt[3]{11x^2p}$	b	$x^2\sqrt[3]{10xp}$
c	$x^2\sqrt[3]{7x^3p^2}$	d	$\sqrt[3]{11x^4p}$
e	$x^2\sqrt[3]{14xp^2}$	f	$x^2\sqrt[3]{9x^2p^3}$

5 Convert the fractional exponent to a radical

$$11^{\frac{1}{3}} \cdot m^{\frac{4}{3}} \cdot n^{\frac{4}{3}}$$

a	$4mn^2\sqrt[3]{8mn^2}$	b	$\sqrt[3]{11m^4n^4}$
c	$m^3n^3\sqrt[3]{8m^2n}$	d	$4mn\sqrt[3]{11m^2n^2}$
e	$3m^2n^3\sqrt[3]{10mn}$	f	$m^3n^3\sqrt[3]{12m^2n}$

6 Convert the fractional exponent to a radical

$$2^{\frac{1}{3}} \cdot n^{\frac{2}{3}} \cdot c^{\frac{2}{3}}$$

a	$\sqrt[3]{2n^2c^2}$	b	$\sqrt[3]{n^2c}$	c	$\sqrt[3]{2n^2c}$	d	$\sqrt[3]{n^4c^4}$	e	$\sqrt[3]{3n^2c^4}$	f	$\sqrt[3]{nc^3}$
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7 Convert the fractional exponent to a radical

$$2^{\frac{1}{3}} \cdot p^{\frac{1}{3}} \cdot n^{\frac{4}{3}}$$

a	$3n^2\sqrt[3]{p^3n}$	b	$n\sqrt[3]{4pn}$
c	$n^3\sqrt[3]{5pn}$	d	$\sqrt[3]{2pn^4}$
e	$n^3\sqrt[3]{p^2n}$	f	$n\sqrt[3]{pn}$