



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

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2 Convert the radical to a fractional exponent

$$\sqrt{11d^3p}$$

a	$11^{-\frac{1}{2}} \cdot d^{-\frac{3}{2}} \cdot p^{-\frac{1}{2}}$	b	$33^{\frac{1}{2}} \cdot d^{\frac{3}{2}} \cdot p^{\frac{1}{2}}$
c	$11^{\frac{1}{3}} \cdot d^{\frac{3}{3}} \cdot p^{\frac{1}{3}}$	d	$11^{\frac{1}{2}} \cdot d^{\frac{3}{2}} \cdot p^{\frac{1}{2}}$
e	$11^{\frac{1}{2}} \cdot d^{\frac{5}{2}} \cdot p^{\frac{1}{2}}$	f	$22^{\frac{1}{2}} \cdot d^{\frac{3}{2}} \cdot p^{\frac{1}{2}}$

4 Convert the radical to a fractional exponent

$$\sqrt{5y^5r^3}$$

a	$5^{\frac{1}{2}} \cdot y^{\frac{4}{2}} \cdot r^{\frac{3}{2}}$	b	$10^{\frac{1}{2}} \cdot y^{\frac{5}{2}} \cdot r^{\frac{3}{2}}$
c	$5^{\frac{1}{2}} \cdot y^{\frac{7}{2}} \cdot r^{\frac{4}{2}}$	d	$5^{-\frac{1}{2}} \cdot y^{-\frac{5}{2}} \cdot r^{-\frac{3}{2}}$
e	$20^{\frac{1}{2}} \cdot y^{\frac{5}{2}} \cdot r^{\frac{3}{2}}$	f	$5^{\frac{1}{2}} \cdot y^{\frac{5}{2}} \cdot r^{\frac{3}{2}}$

6 Convert the radical to a fractional exponent

$$\sqrt{5z^5d^3}$$

a	$5^{\frac{1}{2}} \cdot z^{\frac{5}{2}} \cdot d^{\frac{4}{2}}$	b	$5^{\frac{1}{2}} \cdot z^{\frac{6}{2}} \cdot d^{\frac{2}{2}}$
c	$5^{-\frac{1}{2}} \cdot z^{-\frac{5}{2}} \cdot d^{-\frac{3}{2}}$	d	$5^{\frac{1}{2}} \cdot z^{\frac{5}{2}} \cdot d^{\frac{3}{2}}$
e	$5^{\frac{1}{3}} \cdot z^{\frac{5}{3}} \cdot d^{\frac{3}{3}}$	f	$5^{\frac{1}{2}} \cdot z^{\frac{6}{2}} \cdot d^{\frac{3}{2}}$

1 Convert the radical to a fractional exponent

$$\sqrt{5d^5p^5}$$

a	$5^{\frac{1}{2}} \cdot d^{\frac{7}{2}} \cdot p^{\frac{4}{2}}$	b	$20^{\frac{1}{2}} \cdot d^{\frac{5}{2}} \cdot p^{\frac{5}{2}}$
c	$5^{\frac{1}{2}} \cdot d^{\frac{7}{2}} \cdot p^{\frac{6}{2}}$	d	$5^{-\frac{1}{2}} \cdot d^{-\frac{5}{2}} \cdot p^{-\frac{5}{2}}$
e	$5^{\frac{1}{2}} \cdot d^{\frac{5}{2}} \cdot p^{\frac{5}{2}}$	f	$5^{\frac{1}{3}} \cdot d^{\frac{5}{3}} \cdot p^{\frac{5}{3}}$

3 Convert the radical to a fractional exponent

$$\sqrt{11y^5n^5}$$

a	$11^{\frac{1}{2}} \cdot y^{\frac{5}{2}} \cdot n^{\frac{5}{2}}$	b	$11^{-\frac{1}{2}} \cdot y^{-\frac{5}{2}} \cdot n^{-\frac{5}{2}}$
c	$33^{\frac{1}{2}} \cdot y^{\frac{5}{2}} \cdot n^{\frac{5}{2}}$	d	$11^{\frac{1}{3}} \cdot y^{\frac{5}{3}} \cdot n^{\frac{5}{3}}$
e	$22^{\frac{1}{2}} \cdot y^{\frac{5}{2}} \cdot n^{\frac{5}{2}}$	f	$11^{\frac{1}{2}} \cdot y^{\frac{7}{2}} \cdot n^{\frac{6}{2}}$

5 Convert the radical to a fractional exponent

$$\sqrt{5c^5x}$$

a	$5^{\frac{1}{2}} \cdot c^{\frac{5}{2}} \cdot x^{\frac{1}{2}}$	b	$5^{\frac{1}{3}} \cdot c^{\frac{5}{3}} \cdot x^{\frac{1}{3}}$
c	$5^{\frac{1}{2}} \cdot c^{\frac{6}{2}} \cdot x^{\frac{2}{2}}$	d	$20^{\frac{1}{2}} \cdot c^{\frac{5}{2}} \cdot x^{\frac{1}{2}}$
e	$5^{-\frac{1}{2}} \cdot c^{-\frac{5}{2}} \cdot x^{-\frac{1}{2}}$	f	$5^{\frac{1}{2}} \cdot c^{\frac{4}{2}} \cdot x^{\frac{1}{2}}$

7 Convert the radical to a fractional exponent

$$\sqrt{2xb^5}$$

a	$2^{\frac{1}{2}} \cdot x^{\frac{1}{2}} \cdot b^{\frac{5}{2}}$	b	$2^{\frac{1}{2}} \cdot x^{\frac{1}{2}} \cdot b^{\frac{4}{2}}$
c	$4^{\frac{1}{2}} \cdot x^{\frac{1}{2}} \cdot b^{\frac{5}{2}}$	d	$2^{\frac{1}{2}} \cdot x^{\frac{1}{2}} \cdot b^{\frac{6}{2}}$
e	$2^{\frac{1}{3}} \cdot x^{\frac{1}{3}} \cdot b^{\frac{5}{3}}$	f	$2^{-\frac{1}{2}} \cdot x^{-\frac{1}{2}} \cdot b^{-\frac{5}{2}}$