



Math worksheet on 'Radicals - Divide Monomials (Values and Variables) (Level 3)'. Part of a broader unit on 'Radicals - Division Intro'

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**1** Divide the radical expressions and simplify the answer

$$\frac{\sqrt{176cx^4}}{\sqrt{20c^4x^4}}$$

<b>a</b> $\frac{\sqrt{55c}}{5c^2x^{-2}}$	<b>b</b> $\frac{2\sqrt{55c}}{5c^2}$	<b>c</b> $\frac{\sqrt{55c}}{c^2x^{-1}}$
<b>d</b> $\frac{2\sqrt{55c}}{5c}$	<b>e</b> $\frac{2\sqrt{c}}{5c^3}$	<b>f</b> $\frac{\sqrt{55c}}{5c^3}$

**2** Divide the radical expressions and simplify the answer

$$\frac{\sqrt{32p^3d^3}}{\sqrt{45p^2d^2}}$$

<b>a</b> $\sqrt{10pd}$	<b>b</b> $\frac{2\sqrt{10p}}{15}$
<b>c</b> $4d\sqrt{10pd}$	<b>d</b> $\frac{4d\sqrt{10pd}}{15}$
<b>e</b> $\frac{8\sqrt{3pd}}{45}$	<b>f</b> $\frac{4\sqrt{10pd}}{15}$

**3** Divide the radical expressions and simplify the answer

$$\frac{\sqrt{45z^3r^2}}{\sqrt{28z^2r^2}}$$

<b>a</b> $\frac{\sqrt{70z}}{28}$	<b>b</b> $\frac{\sqrt{105z^{-1}}}{14}$	<b>c</b> $2\sqrt{35z}$
<b>d</b> $\frac{3z\sqrt{35}}{14}$	<b>e</b> $\frac{\sqrt{35z}}{28}$	<b>f</b> $\frac{3\sqrt{35z}}{14}$

**4** Divide the radical expressions and simplify the answer

$$\frac{\sqrt{12p^3}}{\sqrt{80p^4x}}$$

<b>a</b> $\frac{2\sqrt{xp}}{5px}$	<b>b</b> $\frac{\sqrt{15xp}}{10px}$	<b>c</b> $\frac{\sqrt{15xp}}{10}$
<b>d</b> $\frac{3\sqrt{15xp}}{10p}$	<b>e</b> $\frac{\sqrt{xp}}{10p^3x}$	<b>f</b> $\frac{3\sqrt{15xp}}{4px}$

**5** Divide the radical expressions and simplify the answer

$$\frac{\sqrt{75n^4}}{\sqrt{8p^3n^2}}$$

<b>a</b> $\frac{5p^{-2}n\sqrt{6p}}{4}$	<b>b</b> $\frac{5n\sqrt{6p^{-1}}}{p^2}$	<b>c</b> $\frac{5n\sqrt{p}}{4}$
<b>d</b> $\frac{n\sqrt{6p}}{4p^2n^{-2}}$	<b>e</b> $\frac{5n\sqrt{6p}}{4p^2}$	<b>f</b> $\frac{n\sqrt{3p}}{4p^2}$

**6** Divide the radical expressions and simplify the answer

$$\frac{\sqrt{48zr^4}}{\sqrt{63z^2r^4}}$$

<b>a</b> $\frac{4\sqrt{21z}}{21z}$	<b>b</b> $4\sqrt{21}$	<b>c</b> $\frac{4\sqrt{21z^{-1}}}{21z^3}$
<b>d</b> $\frac{4\sqrt{21z^{-1}}}{z}$	<b>e</b> $\frac{4\sqrt{21z}}{21z^2}$	<b>f</b> $\frac{\sqrt{21z}}{z}$

**7** Divide the radical expressions and simplify the answer

$$\frac{\sqrt{63m^3n}}{\sqrt{20n^2}}$$

<b>a</b> $\frac{3m^2\sqrt{35mn}}{10n^2}$	<b>b</b> $\frac{3m^2\sqrt{35n}}{10n^3}$
<b>c</b> $\frac{3m\sqrt{35m^{-1}n}}{10n}$	<b>d</b> $\frac{3m\sqrt{35mn}}{10n}$
<b>e</b> $\frac{3\sqrt{35mn}}{n}$	<b>f</b> $\frac{3m\sqrt{mn}}{10n^{-1}}$