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Math worksheet on *'Radicals - Divide Binomials by Monomials (Values and Variables) (Level 2)'*. Part of a broader unit on *'Radicals - Division Intro'*

Learn online: app.mobius.academy/math/units/radicals_division_intro/

1 Divide the radical expressions and simplify the answer

$$\frac{r\sqrt{3r}+r\sqrt{5}}{r^2\sqrt{5}}$$

a $\frac{\sqrt{15r}+1}{5r^{-1}}$ **b** $\frac{\sqrt{15r}+5}{5r}$ **c** $\frac{\sqrt{15r}+1}{r}$

d $\frac{3\sqrt{15r}+5}{r}$ **e** $\frac{\sqrt{15r^{-1}}+5}{r}$ **f** $\frac{\sqrt{15r}-5}{2r}$

2 Divide the radical expressions and simplify the answer

$$\frac{\sqrt{2d}-\sqrt{11}}{\sqrt{7d}}$$

a $\frac{d^3\sqrt{14}+\sqrt{77d}}{7d}$ **b** $\frac{d^{-1}\sqrt{14}-\sqrt{77d}}{3d}$

c $\frac{2\sqrt{7}+\sqrt{154d}}{14d}$ **d** $\frac{d\sqrt{14}-\sqrt{77d}}{7d}$

e $\frac{d^3\sqrt{14}+\sqrt{77d}}{7d^{-1}}$ **f** $\frac{d^2\sqrt{14}-\sqrt{77d}}{d}$

3 Divide the radical expressions and simplify the answer

$$\frac{y^2\sqrt{11}+\sqrt{2}}{\sqrt{13y}}$$

a $\frac{y^2\sqrt{143y}+\sqrt{26y}}{13y}$ **b** $\frac{y^2\sqrt{143y}+\sqrt{y}}{y}$

c $\frac{y^3\sqrt{143}-\sqrt{26y}}{13y^{-1}}$ **d** $\frac{y^2\sqrt{143y}+5\sqrt{26y}}{3y}$

e $\frac{\sqrt{143y}+\sqrt{26y}}{13y^3}$ **f** $\frac{y^3\sqrt{429y}+\sqrt{78y}}{39y}$

4 Divide the radical expressions and simplify the answer

$$\frac{\sqrt{5c}+\sqrt{2c}}{c\sqrt{11}}$$

a $\frac{\sqrt{c}+\sqrt{22c}}{11c}$ **b** $\frac{\sqrt{55c}+\sqrt{22c}}{11c}$

c $\frac{\sqrt{55}-\sqrt{22c}}{11c^3}$ **d** $\frac{\sqrt{c}-\sqrt{22c}}{4c}$

e $\frac{\sqrt{55c}+\sqrt{22}}{11c^2}$ **f** $\frac{\sqrt{55c}+c\sqrt{22}}{4c}$

5 Divide the radical expressions and simplify the answer

$$\frac{n^2\sqrt{11}-n^2\sqrt{7}}{n\sqrt{11}}$$

a $\frac{11n\sqrt{6}+n\sqrt{231}}{33}$ **b** $\frac{11n-n^{-1}\sqrt{77}}{11}$

c $\frac{11n-n\sqrt{77}}{11}$ **d** $11n-n\sqrt{77}$

e $11n+3n\sqrt{77}$ **f** $11n+2n\sqrt{77}$

6 Divide the radical expressions and simplify the answer

$$\frac{c\sqrt{3c}+\sqrt{5}}{c\sqrt{5}}$$

a $\frac{c\sqrt{15c}+10}{5c^3}$ **b** $\frac{c\sqrt{15c}+1}{c}$

c $\frac{c\sqrt{15c}+5}{5c}$ **d** $\frac{c\sqrt{15c}+5\sqrt{2}}{5c}$

e $\frac{c\sqrt{15c}+5\sqrt{3}}{2c}$ **f** $\frac{c\sqrt{15c}+5}{2c}$

7 Divide the radical expressions and simplify the answer

$$\frac{b\sqrt{2b}-\sqrt{13b}}{\sqrt{7}}$$

a $\frac{2b\sqrt{7b}-\sqrt{182}}{14}$ **b** $\frac{\sqrt{14b}-\sqrt{91b}}{14}$

c $b^2\sqrt{14}-\sqrt{91b}$ **d** $\frac{b\sqrt{14b}-\sqrt{91b}}{7}$

e $b\sqrt{14b}+\sqrt{91b}$ **f** $b\sqrt{14}-\sqrt{91b}$