

RADICALS in SIMPLEST FORM

Simplify: **a** $\sqrt{3}\sqrt{5}$ **b** $\frac{\sqrt{18}}{\sqrt{3}}$ **c** $(2\sqrt{3})^2$

$$\begin{array}{lll} \text{a} & \sqrt{3}\sqrt{5} & \text{b} \quad \frac{\sqrt{18}}{\sqrt{3}} \\ & = \sqrt{3 \times 5} & \\ & = \sqrt{15} & \\ & & \text{c} \quad (2\sqrt{3})^2 \\ & & = 2\sqrt{3} \times 2\sqrt{3} \\ & & = 4 \times 3 \\ & & = 12 \end{array}$$

Write in simplest form: **a** $\sqrt{20}$ **b** $\sqrt{98}$

$$\begin{array}{ll} \text{a} & \sqrt{20} \\ & = \sqrt{4 \times 5} \\ & = \sqrt{4}\sqrt{5} \\ & = 2\sqrt{5} \end{array} \quad \begin{array}{ll} \text{b} & \sqrt{98} \\ & = \sqrt{49 \times 2} \\ & = \sqrt{49}\sqrt{2} \\ & = 7\sqrt{2} \end{array}$$

1 Simplify:

a $(\sqrt{3})^2$ **b** $(\sqrt{7})^2$ **c** $(\sqrt{13})^2$ **d** $(\sqrt{24})^2$

e $\frac{\sqrt{14}}{\sqrt{7}}$ **f** $\frac{\sqrt{24}}{\sqrt{6}}$ **g** $\frac{\sqrt{18}}{\sqrt{2}}$ **h** $\frac{\sqrt{39}}{\sqrt{13}}$

i $(2\sqrt{2})^2$ **j** $(3\sqrt{5})^2$ **k** $(7\sqrt{2})^2$ **l** $(2\sqrt{7})^2$

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2 Write in simplest form:

a $\sqrt{8}$

b $\sqrt{24}$

c $\sqrt{28}$

d $\sqrt{52}$

e $\sqrt{18}$

f $\sqrt{32}$

g $\sqrt{27}$

h $\sqrt{48}$

i $\sqrt{72}$

j $\sqrt{50}$

k $\sqrt{125}$

l $\sqrt{63}$

m $\sqrt{80}$

n $\sqrt{200}$

o $\sqrt{75}$

p $\sqrt{112}$