Name: Key

UNIT 9 DAY 9
DIVIDING RADICALS – STUDY GUIDE

$\sqrt{12}$: $12 = 6 \cdot 2$, $6 = 2 \cdot 3$

$\sqrt{\frac{5}{6}}$ $\frac{\sqrt{5}}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} = \frac{\sqrt{30}}{\sqrt{36}} = \frac{\sqrt{30}}{6}$

$\sqrt{\frac{12}{25}} = \frac{\sqrt{12}}{\sqrt{25}} = \frac{\sqrt{12}}{5}$ $\frac{2\sqrt{3}}{5}$

$\frac{\sqrt{16}}{\sqrt{20}}$ $\frac{4}{\sqrt{20}} \cdot \frac{\sqrt{20}}{\sqrt{20}} = \frac{4\sqrt{20}}{\sqrt{400}} = \frac{4\sqrt{20}}{20} = \frac{4 \cdot 2\sqrt{5}}{20}$ $\frac{5}{\sqrt{36}}$ $\frac{5}{6}$

$= \frac{8\sqrt{5}}{20}$

$= \frac{4\sqrt{5}}{5}$

$\sqrt{20}$: $20 = 4 \cdot 5$, $4 = 2 \cdot 2$

$\frac{4}{\sqrt{12}}$ $\frac{4}{\sqrt{12}} \cdot \frac{\sqrt{12}}{\sqrt{12}}$ $\frac{4\sqrt{12}}{\sqrt{144}} = \frac{4\sqrt{12}}{12}$ $\frac{1\sqrt{12}}{3}$

$\sqrt{\frac{81}{121}}$ $\frac{\sqrt{81}}{\sqrt{121}} = \frac{9}{11}$

$\sqrt{\frac{80}{3}}$ $\frac{\sqrt{80}}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{240}}{3}$ $\frac{4\sqrt{15}}{3}$

$\sqrt{\frac{6}{11}}$ $\frac{\sqrt{6}}{\sqrt{11}} \cdot \frac{\sqrt{11}}{\sqrt{11}} = \frac{\sqrt{66}}{\sqrt{121}} = \frac{\sqrt{66}}{11}$

$\sqrt{240}$: $240 = 3 \cdot 80$, $80 = 8 \cdot 10$, $8 = 2 \cdot 4$, $10 = 2 \cdot 5$, $4 = 2 \cdot 2$