Honors Geometry
Summer Prep
Worksheet 3

Simplify.

1. $\frac{\sqrt{3}}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{6}}{2}$

2. $\frac{5\sqrt{12}}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \frac{5\sqrt{84}}{7} < \frac{21}{4} < \frac{31}{7}$

$\frac{5 \cdot 2\sqrt{21}}{7} = \frac{10\sqrt{21}}{7}$

3. $\frac{72}{\sqrt{10}} \cdot \frac{\sqrt{10}}{\sqrt{10}}$

$\frac{72\sqrt{10}}{10}$

$\frac{36\sqrt{10}}{5}$

4. $\frac{45}{\sqrt{2}} \frac{\sqrt{2}}{\sqrt{2}}$

$\frac{45\sqrt{2}}{2}$

5. $\frac{\sqrt{75}}{\sqrt{13}} \cdot \frac{\sqrt{13}}{\sqrt{13}}$

$\frac{\sqrt{975}}{13} < \frac{25}{39} < \frac{5}{3}$

$\frac{5\sqrt{39}}{13}$

6. $\frac{\sqrt{121}}{\sqrt{22}} = 11$

$\frac{11}{\sqrt{22}} \cdot \frac{\sqrt{22}}{\sqrt{22}} =$

$\frac{11\sqrt{22}}{22}$ $\quad \frac{\sqrt{22}}{2}$

7. $\frac{\sqrt{81}}{\sqrt{3}} = \sqrt{27}$

$3 \quad 9$

$3\sqrt{3}$

8. $\frac{\sqrt{55}}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$

$\frac{\sqrt{110}}{2}$

9. $\frac{\sqrt{20}}{\sqrt{6}}$

$\frac{\sqrt{10}}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

$\frac{\sqrt{30}}{3}$

10. $\frac{39\sqrt{3}}{\sqrt{13}} \cdot \frac{\sqrt{13}}{\sqrt{13}}$

$\frac{39\sqrt{39}}{13}$

$3\sqrt{39}$

11. $\frac{7\sqrt{2}}{\sqrt{11}} \cdot \frac{\sqrt{11}}{\sqrt{11}}$

$\frac{7\sqrt{22}}{11}$

12. $\frac{18\sqrt{5}}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}}$

$\frac{18\sqrt{30}}{6}$

$3\sqrt{30}$