

Name: Answer Key
Serafino · PrecalculusDate: 9/8/14**0A Working with Radicals**

Classwork – Review for Skills Check

Simplify each radical expression fully. Put a box around your final answer.

 14
 9
 16
 25
 36
 49

1. $\sqrt{24}$
 $2 \times 4 \times 6$
 $2\sqrt{6}$

2. $\sqrt{25}$
 5

3. $\sqrt{14}$
 $\sqrt{14}$

4. $5\sqrt{12}$
 $2 \times 4 \times 3$
 $10\sqrt{3}$

5. $3\sqrt{2} \cdot \sqrt{5}$
 $3\sqrt{10}$

6. $4\sqrt{3} \cdot 2\sqrt{5}$
 $8\sqrt{15}$

7. $6\sqrt{3} \cdot 2\sqrt{8}$

$12 \sqrt{24}$
 $2 \times 4 \times 6$

$24\sqrt{6}$

8. $\sqrt{8} \cdot \sqrt{8}$

8

9. $(4\sqrt{3})^2$

$16 \cdot 3$

48

10. $\sqrt{3} \cdot \sqrt{6}$

$$\frac{\sqrt{18}}{92}$$

$$3\sqrt{2}$$

11. $\frac{12\sqrt{7}}{6}$

$$2\sqrt{7}$$

12. $\frac{\sqrt{20}}{\sqrt{4}}$

$$\sqrt{5}$$

13. $\frac{4\sqrt{30}}{\sqrt{2}}$

$$4\sqrt{15}$$

14. $\frac{8\sqrt{24}}{6\sqrt{8}}$

$$\frac{4\sqrt{3}}{3}$$

15. $\frac{6\sqrt{150}}{4\sqrt{2}}$

$$\frac{5 \cdot 25 \cdot 3}{2}$$

$$\frac{3\sqrt{75}}{2}$$

$$\frac{15\sqrt{3}}{2}$$

16. $\frac{\frac{\sqrt{3}}{2}}{\frac{1}{\sqrt{2}}}$

$$\frac{\sqrt{3}}{2} \cdot \frac{\sqrt{2}}{1}$$

$$\frac{\sqrt{6}}{2}$$

17. $\frac{\frac{\sqrt{3}}{2}}{\frac{\sqrt{2}}{1}}$

$$\frac{\sqrt{3}}{2} \cdot \frac{1}{\sqrt{2}}$$

$$\frac{\sqrt{3}}{2\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$$

$$\frac{\sqrt{6}}{4}$$

18. $\frac{\frac{1}{3\sqrt{3}}}{\frac{\sqrt{2}}{6}}$

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

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

$$= \frac{\sqrt{6}}{3}$$