

**PreAP Geometry**  
**Simplifying Radicals**

Name \_\_\_\_\_

Directions: Simplify. If an answer is not a whole number, leave it in simplest radical form. You must show work.

1.  $\sqrt{8}$

2.  $\sqrt{20}$

3.  $\sqrt{96}$

4.  $\sqrt{75}$

5.  $\sqrt{108}$

6.  $\sqrt{242}$

7.  $\sqrt{196}$

8.  $\sqrt{500}$

9.  $4\sqrt{72}$

10.  $3\sqrt{28}$

11.  $5\sqrt{18}$

12.  $3\sqrt{54}$

13.  $3 \cdot 5\sqrt{7}$

14.  $2\sqrt{5} \cdot 3\sqrt{2}$

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

16.  $(\sqrt{7})^2$

17.  $(4\sqrt{3})^2$

18.  $(3\sqrt{2})^2$

$$19. \frac{1}{\sqrt{3}}$$

$$20. \frac{3}{\sqrt{7}}$$

$$21. \frac{36}{\sqrt{2}}$$

$$22. \frac{16}{\sqrt{6}}$$

$$23. \frac{25}{\sqrt{5}}$$

$$24. \frac{24}{\sqrt{3}}$$

$$25. \frac{2\sqrt{2}}{\sqrt{3}}$$

$$26. \frac{3\sqrt{2}}{\sqrt{6}}$$

$$27. \frac{2\sqrt{5}}{\sqrt{2}}$$