

Geometry  
Simplifying Radicals

Name \_\_\_\_\_

**Simplify the following. NO CALCULATOR. SHOW ALL WORK.**

1.  $\sqrt{50}$

2.  $\sqrt{75} + \sqrt{300}$

3.  $\sqrt{48}$

4.  $\sqrt{27} + \sqrt{75}$

5.  $9\sqrt{3} \cdot 7$

6.  $6\sqrt{3} \cdot 5\sqrt{5}$

7.  $5\sqrt{3} \cdot 10$

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

9.  $6\sqrt{5} \cdot 7\sqrt{12}$

10.  $8\sqrt{49}$

11.  $8\sqrt{3} \cdot 5\sqrt{12}$

12.  $-6\sqrt{25}$

13.  $7\sqrt{6} + 9\sqrt{6}$

14.  $7\sqrt{2} + 3 - 8\sqrt{2}$

15.  $4\sqrt{3} + 12\sqrt{3}$

16.  $10\sqrt{2} - 3 - 5\sqrt{2}$

17.  $(3\sqrt{5})^2$

18.  $\frac{\sqrt{14}}{\sqrt{2}}$

19.  $\frac{7}{\sqrt{2}}$

20.  $\frac{12}{\sqrt{3}}$