NAME _____ DATE _____ PERIOD _____

# Lesson 9 Skills Practice

## *Estimate Roots*

**Estimate to the nearest integer.**

1. $\sqrt{5}$
2. $\sqrt{18}$
3. $\sqrt{10}$
4. $\sqrt{34}$
5. $\sqrt{53}$
6. $\sqrt{80}$
7. $\sqrt[3]{510}$
8. $\sqrt[3]{999}$
9. $\sqrt[3]{119}$
10. $\sqrt{77}$
11. $\sqrt{171}$
12. $\sqrt{230}$
13. $\sqrt{147}$
14. $\sqrt{194}$
15. $\sqrt{290\frac{3}{7}}$
16. $\sqrt{440}$
17. $\sqrt{578}$
18. $\sqrt{730}$
19. $\sqrt[3]{780}$
20. $\sqrt[3]{1{,}370}$
21. $\sqrt[3]{947}$
22. $\sqrt{17.8}$
23. $\sqrt{11.5}$
24. $\sqrt{37.7}$
25. $\sqrt{23.8}$
26. $\sqrt{59.4}$
27. $\sqrt{97.3}$
28. $\sqrt[3]{32.5}$
29. $\sqrt[3]{211.7}$
30. $\sqrt{692.9}$

NAME _____ DATE _____ PERIOD _____

# Lesson 9 Homework Practice

## *Estimate Roots*

**Estimate to the nearest integer.**

1. $\sqrt{38}$
2. $\sqrt{53}$
3. $\sqrt{99}$
4. $\sqrt{227}$
5. $\sqrt[3]{26}$
6. $\sqrt[3]{214}$
7. $\sqrt[3]{80}$
8. $\sqrt[3]{510}$
9. $\sqrt{86.4}$
10. $\sqrt{45.2}$
11. $\sqrt{7\frac{2}{5}}$
12. $\sqrt{27\frac{3}{8}}$

**Order from least to greatest.**

13. 8, 10, $\sqrt{61}$, $\sqrt{71}$
14. $\sqrt{45}$, 9, 6, $\sqrt{63}$
15. $\sqrt{50}$, 7, $\sqrt{44}$, 5

**ALGEBRA Estimate the solution of each equation to the nearest integer.**

16. $d^2 = 61$
17. $z^2 = 85$
18. $r^2 = 3.7$

19. **GEOMETRY** The radius of a cylinder with volume $V$ and height 10 centimeters is approximately $\sqrt{\frac{V}{30}}$. If a can that is 10 centimeters tall has a volume of 900 cubic centimeters, estimate its radius.

20. **TRAVEL** The formula $s = \sqrt{18d}$ can be used to find the speed $s$ of a car in miles per hour when the car needs $d$ feet to come to a complete stop after slamming on the brakes. If it took a car 12 feet to come to a complete stop after slamming on the brakes, estimate the speed of the car.

**GEOMETRY The formula for the area of a square is $A = s^2$, where $s$ is the length of a side. Estimate the length of a side for each square.**

21. Area = 40 square inches

22. Area = 97 square feet