

HOMEWORK: Simplifying Square and Cube Roots

Name _____

Simplify each expression.

1. $\sqrt{4} + 15$

2. $45 - \sqrt{49}$

3. $\sqrt{250 - 25}$

4. $\frac{\sqrt{196}}{7-5}$

5. $4\sqrt{25}$

6. $\sqrt[3]{27} + 24$

7. $\sqrt[3]{\frac{1}{8}}$

8. $34 - \sqrt[3]{125}$

9. $\frac{\sqrt[3]{216}}{2}$

Solve the following problems.

10. What is the length of a baseball diamond with an area of 8100 square feet?

11. A square bulletin board has an area of 16 feet. How long is each side of the board?

12. What is the side length of a cube that has a volume of 64 cubic inches?

13. You have a box that is a perfect cube. The box holds 125 cubic centimeters. How much paper would be needed to cover the box?

Name: _____ Date: _____

Practice - Squares and Square Roots

Evaluate each square root.

1. $\sqrt{16}$ 2. $-\sqrt{36}$ 3. $\sqrt{225}$ 4. $-\sqrt{400}$

Approximate each square root to the nearest integer.

5. $\sqrt{15}$ 6. $\sqrt{140}$ 7. $\sqrt{29+8}$ 8. $-\sqrt{118}$

Evaluate the expression $\sqrt{x^2 + y^2}$ for the given values.

9. $x = 9$ and $y = 12$ 10. $x = 3$ and $y = 4$ 11. $x = 8$ and $y = 6$

Find the square root.

12. $\sqrt{\frac{1}{9}}$ 13. $\sqrt{\frac{25}{36}}$ 14. $\sqrt{\frac{49}{81}}$ 15. $\sqrt{\frac{100}{121}}$

Find the two square roots of the number.

16. 0.64 17. 0.09 18. 1.69 19. 5.29

Tell whether the number is rational or irrational.

20. $\sqrt{360}$ 21. $\frac{2}{11}$ 22. $\sqrt{8100}$ 23. $\sqrt{\frac{196}{225}}$

Word Problems - Squares and Square Roots

1. Rosy wants a large picture window put in the living room of her new house. The window is to be square with an area of 49 square feet. How long should each side of the window be?	2. If the area of a square is 1 square meter, how many centimeters long is each side?
3. A miniature portrait of George Washington is square and has an area of 169 square centimeters. How long is each side of the portrait?	4. Cara has 196 marbles that she is using to make a square formation. How many marbles should be in each row?
5. Al has 324 square paving stones that he plans to use to construct a square patio. How many paving stones wide will the patio be?	6. A square ice skating rink has an area of 1849 square feet. What is the perimeter of the rink?
7. You are tiling a room in your home that measures 18 feet long by 12 feet wide. Each square tile has an area of 324 square inches. What are the dimensions of a tile? How many tiles will you need to cover the floor?	8. The area of a circle is 38.6 square centimeters. Calculate the radius and diameter of the circle using the area formula.