

## Unit 1 Quiz Review

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify completely. Be sure to show all work for credit.**

1)  $5\sqrt{112}$

2)  $\sqrt{108x^9y^2z^{14}}$

3)  $3\sqrt{44a^7b^{16}}$

4)  $\sqrt[3]{189}$

5)  $\sqrt[3]{-16}$

6)  $\sqrt{72} - \sqrt{18}$

7)  $4\sqrt{48} - \sqrt{147}$

8)  $5\sqrt{6} \cdot \sqrt{27}$

$$9) 7\sqrt{10} \cdot -3\sqrt{18}$$

$$10) \sqrt{6}(7\sqrt{3} + 6)$$

$$11) \sqrt{2}(5\sqrt{10} - 2)$$

$$12) (1 + \sqrt{8})^2$$

$$13) (4 - \sqrt{7})^2$$

$$14) \sqrt{\frac{49}{2}}$$

$$15) \frac{2\sqrt{18}}{\sqrt{5}}$$

$$16) \frac{6\sqrt{8}}{4\sqrt{3}}$$

$$17) \frac{5}{\sqrt{10}}$$

$$18) \frac{5 - \sqrt{3}}{\sqrt{12}}$$

$$19) \frac{\sqrt{8}}{4 + \sqrt{6}}$$

$$20) \frac{4}{-1 - \sqrt{5}}$$

21) You take a road trip. First day, you travel  $5\sqrt{32}$ , second day you travel  $7\sqrt{18}$ . How far did you travel?

22) Find the area of a rectangle with length  $5 - \sqrt{2}$  and width  $7\sqrt{2} + 1$ .

23) Given a square with side length  $7 - 2\sqrt{3}$ , find the area.