

Name \_\_\_\_\_

Hour \_\_\_\_\_

**Algebra 2 Quiz 7.2 -7.3 REVIEW NO CALCULATOR SHOW ALL WORK TO RECEIVE FULL CREDIT**

Simplify using exponent properties. Use only positive exponents in your final answer.

1.  $\frac{(4x^2y^3)^2}{8x^4y^7}$

2.  $\left(\frac{r^{-1}s^3}{t}\right)^{-4}$

Simplify completely.

3.  $\sqrt{28x^7y^{10}z^5}$

4.  $\sqrt[3]{b^3c^9}$

5.  $\sqrt[4]{16x^{36}y^{48}}$

Perform the indicated operation. Simplify completely.

6.  $6\sqrt{5x} - 4\sqrt{5x}$

7.  $3\sqrt{x} - 5\sqrt{x}$

8.  $9\sqrt{3} + 2\sqrt{3}$

9.  $5\sqrt{2} - 2\sqrt{3}$

10.  $4\sqrt[3]{81} + 2\sqrt[3]{72} - 3\sqrt[3]{24}$

11.  $4\sqrt{27} + 6\sqrt{3}$

12.  $\sqrt{28} + 4\sqrt{63} - 2\sqrt{7}$

13.  ~~$4\sqrt[3]{81} + 2\sqrt[3]{72} - 3\sqrt[3]{24}$~~

1.  $\frac{2/y}{t^4 r^4}$

2.  $\frac{t^4 r^4}{s^{12}}$

3.  $2x^3 y^5 z^2 \sqrt{7xz}$

4.  $bc^3$

5.  $2x^9 y^{12}$

6.  $5\sqrt[4]{5x}$

7.  $-2\sqrt{x}$

8.  $11\sqrt{3}$

9.  $5\sqrt{2} - 2\sqrt{3}$

10.  $6\sqrt[3]{3} + 4\sqrt[3]{9}$

11.  $18\sqrt{3}$

12.  $12\sqrt{7}$

13. #10

Multiply and simplify completely

14.  $\sqrt{5x^4y^3} \cdot \sqrt{45x^3y}$

15.  $\sqrt[3]{10x^2y^4} \cdot \sqrt[3]{4x^2y}$

16.  $(1 + 4\sqrt{10})(2 - \sqrt{10})$

17.  $(\sqrt{11} - \sqrt{7})(\sqrt{11} + \sqrt{7})$

18.  $(1 + 7\sqrt{3})(4 + 7\sqrt{3})$

Simplify and rationalize all denominators.

19.  $\frac{\sqrt{12x}}{\sqrt{3}}$

20.  $\frac{\sqrt{5x}}{\sqrt{2}}$

21.  $\frac{\sqrt{15x}}{2\sqrt{2}}$

22.  $\frac{\sqrt[3]{250x^7y^3}}{\sqrt[3]{2x^2y}}$

23.  $\frac{\sqrt[3]{x^2}}{\sqrt[3]{4}}$

24.  $\frac{3}{1 + \sqrt{5}}$

25.  $\frac{5 - 2\sqrt{3}}{2 + \sqrt{3}}$

14.  $15x^3y^2\sqrt{x}$

15.  $2xy\sqrt[3]{5xy^2}$

16.  $-38 + 7\sqrt{10}$

17.  $4$

18.  $151 + 35\sqrt{3}$

19.  $2\sqrt{x}$

20.  $\frac{\sqrt{10x}}{2}$

21.  $\frac{\sqrt{30x}}{4}$

22.  $5x\sqrt[3]{x^2y^2}$

23.  $\frac{\sqrt[3]{2x^2}}{2}$

24.  $\frac{-3 + 3\sqrt{5}}{4}$

25.  $16 - 9\sqrt{3}$