

Algebra II Unit 1 Quiz 1 Review

Name

Simplify.

1.) $(-xy)^5 \cdot x^{-4}y^{-4}$

2.) $-ba^4 \cdot (a^5b^{-1})^2$

3.) $(y^2)^5 \cdot (-x^{-1})^3$

4.) $x^3y^2 \cdot (-yx^3)^{-2}$

Perform the indicated operation.

5.) $3\sqrt{27} + 4\sqrt{45} - \sqrt{75}$

6.) $-\sqrt[3]{16} + 3\sqrt[3]{162} - 3\sqrt[3]{48}$

7.) $-3\sqrt{5} - 2\sqrt{45} - 2\sqrt{12}$

8.) $\sqrt[3]{5x^2y} \cdot \sqrt[3]{75x^4y^2}$

9.) $(\sqrt{2k} + \sqrt{7k})(-7\sqrt{2} + 7\sqrt{7})$

10.) $(\sqrt{7x} + \sqrt{2x})(-3\sqrt{7} + \sqrt{2})$

11.) $\sqrt{\frac{5}{14xy}}$

12.) $\frac{4 + \sqrt{5}}{-4 + \sqrt{5}}$

13.) $\frac{-5 - 4\sqrt{2}}{-2 + 5\sqrt{2}}$

Write each expression in radical form.

14.) $(7x)^{\frac{2}{3}}$

15.) $x^{\frac{3}{2}}$

Write each expression in exponential form.

16.) $(\sqrt[3]{10n})^5$

17.) $\frac{1}{(\sqrt[3]{6x})^4}$

Simplify.

18.) $(27a^3)^{\frac{2}{3}}$

19.) $\left(\frac{ab^{\frac{2}{3}}}{x^{\frac{1}{2}}}\right)^{18}$

20.) $\left(3x^{\frac{1}{3}}y^{-6}\right)^6$

21.) $(256n^6)^{\frac{3}{2}}$

22.) $(-a^{-1}b^0 \bullet a^{-5}b^4)^2$