Names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

EXPONENT/RADICAL REVIEW

Simplify each expression. Use only positive exponents.

|  |  |  |  |
| --- | --- | --- | --- |
| 1) Rationalize the denominator and simplify: $\frac{5}{2+\sqrt{3}}$ | 6) Simplify: $\sqrt[5]{32y^{10}}$ | 11) Find the 4th root: $\frac{10000}{81}$ | 16) Simplify: $\frac{-3x^{-12}}{x^{-10}}$ |
| 2) Simplify:$$\left(-2x^{3}y\right)^{2}\left(-3xy^{-4}\right)$$ | 7) Mulitiply and Simplify$$\left(1-3\sqrt{7}\right)\left(4-3\sqrt{7}\right)$$ | 12) Simplify:$$\sqrt[4]{-81}$$ | 17) Simplify:$$9\sqrt{3}+\sqrt{3}$$ |
| 3) Simplify: $\frac{\left(4f^{-2}g^{5}\right)^{2}}{3f^{0}}$ | 8) Simplify: $\sqrt[3]{-27}$ | 13) Simplify: $\sqrt[3]{x^{9}y^{12}}$ | 18) Simplify: $\sqrt[3]{64x^{5}y^{3}}$ |
| 4) Simplify: $7^{-3}∙7^{3}$ | 9) Rationalize the denominator and simplify:$$\frac{1+\sqrt{5}}{1-\sqrt{5}}$$ | 14) Simplify:$$4\sqrt{2x}∙5\sqrt{6xy^{2}}$$ | 19) Simplify: $$\frac{\sqrt[3]{18y^{7}}}{\sqrt[3]{9y^{2}}}$$ |
| 5) Simplify:$$\sqrt[3]{6}∙\sqrt[3]{16}$$ | 10) Simplify:$\sqrt{\left(x-1\right)^{6}}$ | 15) Simplify:$$\frac{\sqrt[4]{32h^{3}}}{\sqrt[4]{2h^{7}}}$$ | 20) Simplify:$$3\sqrt{12}+7\sqrt{75}-\sqrt{54}$$ |