Algebra 2 Bellwork Wednesday, February 17, 2016

Simplify each. Make sure there are no exponents are negative or zero.

1. $(6a^{-8}b^3)^2(5a^5b^{-2})^3$

2. $\dfrac{-12g^{-2}h^{-8}j^4}{16g^8h^{-5}j}$

3. $\left(\dfrac{6m^5n^{-2}}{2m^{-3}n^7p^{-4}}\right)^{-3}$

Simplify each radical.

4. $\sqrt[3]{648}$

5. $\sqrt[4]{567}$

Algebra 2 Bellwork Wednesday, February 17, 2016 ANSWERS

Simplify each. Make sure there are no exponents are negative or zero.

1. $(6a^{-8}b^3)^2(5a^5b^{-2})^3$

$= (36a^{-16}b^6)(125a^{15}b^{-6})$

$= 4500a^{-1}b^0$

$= \dfrac{4500}{a}$

2. $\dfrac{-12g^{-2}h^{-8}j^4}{16g^8h^{-5}j} = \dfrac{-3j^3}{4g^{10}h^3}$

3. $\left(\dfrac{6m^5n^{-2}}{2m^{-3}n^7p^{-4}}\right)^{-3} = \left(\dfrac{3m^8p^4}{n^9}\right)^{-3} = \left(\dfrac{n^9}{3m^8p^4}\right)^3 = \dfrac{n^{27}}{27m^{24}p^{12}}$

Simplify each radical.

3
-7
04
125
216
~~343~~

4. $\sqrt[3]{648}$

$= \sqrt[3]{216 \cdot 3}$

$= 6\sqrt[3]{3}$

~~16~~
81
~~256~~
~~625~~

5. $\sqrt[4]{567}$

$= \sqrt[4]{81 \cdot 7}$

$= 3\sqrt[4]{7}$