Algebra 2 Bellwork Thursday, April 23, 2015 3rd hour

Rationalize all denominators and simplify.

1. $\frac{14a^2}{\sqrt{6a^5}}$

2. $\frac{12c}{\sqrt[3]{3c^5d^{10}}}$

3. $\frac{8}{\sqrt[4]{10w^6x^3y^9}}$

4. $\frac{20h^7k^3}{\sqrt[5]{5g^{13}h^2k^{11}}}$

Algebra 2 Bellwork Thursday, April 23, 2015 3rd hour ANSWERS

Rationalize all denominators and simplify.

1. $\frac{14a^2}{\sqrt{6a^5}} \cdot \frac{\sqrt{6a}}{\sqrt{6a}}$

$= \frac{14a^2\sqrt{6a}}{\sqrt{36a^6}} = \frac{14a^2\sqrt{6a}}{6a^3} = \boxed{\frac{7\sqrt{6a}}{3a}}$

2. $\frac{12c}{\sqrt[3]{3c^5d^{10}}} \cdot \frac{\sqrt[3]{3^2cd^2}}{\sqrt[3]{3^2cd^2}} = \frac{12c\sqrt[3]{9cd^2}}{\sqrt[3]{3^3c^6d^{12}}}$

$= \frac{12c\sqrt[3]{9cd^2}}{3c^2d^4}$

$= \boxed{\frac{4\sqrt[3]{9cd^2}}{cd^4}}$

3. $\frac{8}{\sqrt[4]{10w^6x^3y^9}} \cdot \frac{\sqrt[4]{10^3w^2xy^3}}{\sqrt[4]{10^3w^2xy^3}}$

$= \frac{8\sqrt[4]{1000w^2xy^3}}{\sqrt[4]{10^4w^8x^4y^{12}}}$

$= \frac{8\sqrt[4]{1000w^2xy^3}}{10w^2xy^3} = \boxed{\frac{4\sqrt[4]{1000w^2xy^3}}{5w^2xy^3}}$

4. $\frac{20h^7k^3}{\sqrt[5]{5g^{13}h^2k^{11}}} \cdot \frac{\sqrt[5]{5^4g^2h^3k^4}}{\sqrt[5]{5^4g^2h^3k^4}}$

$= \frac{20h^7k^3\sqrt[5]{5^4g^2h^3k^4}}{\sqrt[5]{5^5g^{15}h^5k^{15}}}$

$= \frac{20h^7k^3\sqrt[5]{5^4g^2h^3k^4}}{5g^3hk^3}$

$= \boxed{\frac{4h^6\sqrt[5]{5^4g^2h^3k^4}}{1}}$