Algebra 2 Bellwork Thursday, February 18, 2016

Simplify each. Write your answers so that no exponents are zero or negative.

1. $\frac{3^{-2}w^5z^{-6}}{6v^0w^{-4}x^7}$

2. $\left(\frac{5c^{-4}d^5}{15c^{-2}d^{-7}}\right)^{-2}$

Write each in radical form

3. $K^{\frac{8}{7}}$

4. $H^{\frac{5}{2}}$

5. $D^{\frac{-1}{6}}$

Write each in exponential form:

6. $\sqrt[9]{M^7}$

7. $\sqrt[4]{R}$

8. $6\sqrt{C^3}$

9. $\sqrt[5]{10a^4}$

Algebra 2 Bellwork Thursday, February 18, 2016 Answers

Simplify each. Write your answers so that no exponents are zero or negative.

1. $\frac{3^{-2}w^5z^{-6}}{6v^0w^{-4}x^7} = \frac{w^5w^4}{3^2 \cdot 6\, x^7 z^6} = \frac{w^9}{54x^7z^6}$

2. $\left(\frac{5c^{-4}d^5}{15c^{-2}d^{-7}}\right)^{-2} = \left(\frac{d^{12}}{3c^2}\right)^{-2} = \frac{d^{-24}}{3^{-2}c^{-4}} = \frac{9c^4}{d^{24}}$

Write each in radical form

3. $K^{\frac{8}{7}} = \sqrt[7]{K^8}$ or $\left(\sqrt[7]{K}\right)^8$

4. $H^{\frac{5}{2}} = \sqrt{H^5}$ or $\left(\sqrt{H}\right)^5$

5. $D^{\frac{-1}{6}} = \frac{1}{D^{1/6}} = \frac{1}{\sqrt[6]{D}}$

Write each in exponential form:

6. $\sqrt[9]{M^7} = M^{\frac{7}{9}}$

7. $\sqrt[4]{R} = R^{\frac{1}{4}}$

8. $6\sqrt{C^3} = 6C^{3/2}$

9. $\sqrt[5]{10a^4} = (10a^4)^{1/5}$ or $10^{1/5}a^{4/5}$