Algebra 1 Bellwork Tuesday, May 19, 2015

2 Simplify each.

1. $\sqrt{6x^5y^6} \cdot \sqrt{12x^7y^9}$

2. $\sqrt{\frac{100a^{19}}{81a^{12}}}$

3. $\sqrt{\frac{27g^9}{48g^2}}$

4. $\sqrt{\frac{7k^3}{175k^{11}}}$

Rationalize the denominator in each radical expression.

5. $\frac{12}{\sqrt{10}}$

6. $\frac{2\sqrt{5}}{\sqrt{7b}}$

7. $\frac{8a}{\sqrt{12a^3}}$

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ANSWERS

Simplify each.

1. $\sqrt{6x^5y^6} \cdot \sqrt{12x^7y^9} = \sqrt{72x^{12}y^{15}}$ ($36 \cdot 2$)

$= 6x^6y^7\sqrt{2y}$

2. $\sqrt{\frac{100a^{19}}{81a^{12}}} = \sqrt{\frac{100a^7}{81}}$

$= \frac{10a^3\sqrt{a}}{9}$

3. $\sqrt{\frac{27g^9}{48g^2}} = \sqrt{\frac{9g^7}{16}}$

$= \frac{3g^3\sqrt{g}}{4}$

4. $\sqrt{\frac{7k^3}{175k^{11}}} = \sqrt{\frac{1}{25k^8}}$

$= \frac{1}{5k^4}$

Rationalize the denominator in each radical expression.

5. $\frac{12}{\sqrt{10}} \cdot \frac{\sqrt{10}}{\sqrt{10}}$

$= \frac{12\sqrt{10}}{10}$

$= \frac{6\sqrt{10}}{5}$

6. $\frac{2\sqrt{5}}{\sqrt{7b}} \cdot \frac{\sqrt{7b}}{\sqrt{7b}}$

$= \frac{2\sqrt{35b}}{7b}$

7. $\frac{8a}{\sqrt{12a^3}} \cdot \frac{\sqrt{3a}}{\sqrt{3a}} = \frac{8a\sqrt{3a}}{\sqrt{36a^4}}$

$= \frac{8a\sqrt{3a}}{6a^2}$

$= \frac{4\sqrt{3a}}{3a}$