Bellwork Alg 2 Wednesday, January 29, 2020

Simplify each. Write answers in simplified radical form. Assume that all variables are positive.

1. $\sqrt{49g^4h^7} \cdot \sqrt{11g^5h^{11}}$

2. $\sqrt[3]{4m^5n^{13}} \cdot \sqrt[3]{6m^8n^4}$

3. $\dfrac{\sqrt{15x^8y^3}}{\sqrt{48x^3y^7}}$

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ANSWERS

Simplify each. Write answers in simplified radical form. Assume that all variables are positive.

NO ABSOLUTE VALUE SYMBOLS

1. $\sqrt{49g^4h^7} \cdot \sqrt{11g^5h^{11}}$

$= 7g^2h^3\sqrt{h} \cdot \sqrt{11g^5h^{11}}$

$= 7g^2h^3 \cdot \sqrt{11g^5h^{12}}$

$= 7g^2h^3 \cdot g^2h^6\sqrt{11g}$

$= \boxed{7g^4h^9\sqrt{11g}}$

2. $\sqrt[3]{4m^5n^{13}} \cdot \sqrt[3]{6m^8n^4} = \sqrt[3]{24m^{13}n^{17}}$

$8 \cdot 3$

$= \boxed{2m^4n^5\sqrt[3]{3mn^2}}$

3. $\dfrac{\sqrt{15x^8y^3}}{\sqrt{48x^3y^7}} = \sqrt{\dfrac{15x^8y^3}{48x^3y^7}} = \sqrt{\dfrac{5x^5}{16y^4}} = \boxed{\dfrac{x^2\sqrt{5x}}{4y^2}}$