

Bellwork Hon Alg 2 Friday, March 17, 2017

Rationalize each denominator. Make sure your answer is simplified.

1. $\frac{24}{\sqrt{7}}$

2. $\frac{30}{\sqrt{18}}$

3. $\frac{5}{\sqrt{6m}}$

4. $\frac{13}{\sqrt[3]{16}}$

5. $\frac{15a}{\sqrt[3]{11a^2}}$

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ANSWERS

1. $\frac{24}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}}$

$= \frac{24\sqrt{7}}{7}$

2. $\frac{30}{\sqrt{18}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$

$= \frac{30\sqrt{2}}{\sqrt{36}} = \frac{30\sqrt{2}}{6}$
 $= 5\sqrt{2}$

3. $\frac{5}{\sqrt{6m}} \cdot \frac{\sqrt{6m}}{\sqrt{6m}}$

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

4. $\frac{13}{\sqrt[3]{16}} = \frac{13}{\sqrt[3]{8 \cdot 2}} = \frac{13}{2\sqrt[3]{2}} \cdot \frac{\sqrt[3]{2^2}}{\sqrt[3]{2^2}}$

$= \frac{13\sqrt[3]{4}}{2\sqrt[3]{2^3}}$

$= \frac{13\sqrt[3]{4}}{2 \cdot 2}$

$= \frac{13\sqrt[3]{4}}{4}$

5. $\frac{15a}{\sqrt[3]{11a^2}} \cdot \frac{\sqrt[3]{11^2a}}{\sqrt[3]{11^2a}} = \frac{15a\sqrt[3]{121a}}{\sqrt[3]{11^3a^3}}$

$= \frac{15a\sqrt[3]{121a}}{11a}$

$= \frac{15\sqrt[3]{121a}}{11}$