Given this rational expression:  $25c^4$ 

$$\frac{25c^4}{4d^9}$$

Why can you do this?

of the expression.

$$\frac{(25c^4)}{(4d^9)\cdot 2} = 1$$

Here you are actually multiplying the original expression by 1, and this doesn't change the value

But you can't do this?

$$\frac{\sqrt{25c^4}}{\sqrt{4d^9}}$$

This is the same as taking the square root of the whole ratio which changes the value of the original expression.

Simplify.

Simplify. The following is only one of the many ways to 
$$\left(\frac{2g^{-5}h^{-\frac{1}{2}}}{54gh^4}\right)^{-\frac{1}{3}} \quad \text{Simplify this expression.}$$
 1. Simplify inside parentheses first

$$=\left(\frac{1}{2796h^{9/2}}\right)^{-1/3}$$

$$= (279^6 h^{\frac{9}{2}})^{\frac{1}{3}}$$

3. apply the 1/3 power  $= 27^{\frac{1}{3}} q^{6.\frac{1}{3}} h^{\frac{9}{2}.\frac{1}{3}}$ 

$$= 27^{3} g^{8} ^{3} h^{2} = 39^{2} h^{3/2}$$

$$= 39^{2} h^{3/2}$$

Simplify.

$$\frac{\sqrt[3]{m^5}}{\sqrt[4]{m^3}} = \frac{m^{\frac{5}{3}}}{m^{\frac{5}{1}}M} = m^{\frac{5}{3} - \frac{3}{4}}$$

$$= m^{\frac{1}{12}} - \frac{9}{12}$$

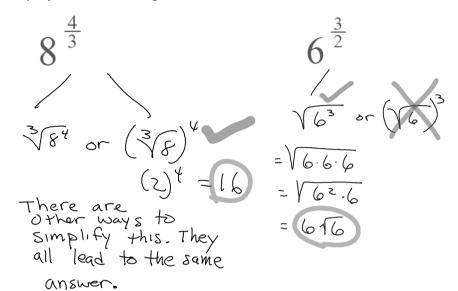
$$= m^{\frac{1}{12}}$$

Simplify without using a calculator.

$$3^{\frac{1}{2}} \cdot 27^{\frac{1}{2}} \longrightarrow 3^{\frac{1}{2}} \cdot (3^{3})^{2} = 3^{\frac{1}{2}} \cdot 3^{\frac{3}{2}}$$

$$= 3^{\frac{1}{2} + \frac{3}{2}}$$

Simplify without using a calculator.



Simplify without using a calculator.

$$4^{-\frac{5}{2}} = \frac{1}{\sqrt{\frac{5}{2}}}$$

$$\sqrt{\frac{4}{9}} = \sqrt{\frac{1}{2}}$$

$$= \frac{1}{(2)^{5}}$$

$$= \frac{1}{\sqrt{3}}$$

Simplify without using a calculator.

$$91.5 = 9^{\frac{3}{2}}$$

$$(3)^{3}$$

$$= 27$$

You can now finish Hwk #2: Sec 7-4

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**Due Tomorrow** 

Problems 39, 40, 42, 44, 46, 49, 66, 67, 70, 72