U4L2 Adding and Subtracting Rational Expressions

February-23-15 10:01 AM

Feb. 23, 2015

A) Review

i) $\frac{20y^2}{10y^1}$

$= \frac{2y^1}{1}$

$= \boxed{2y}$ ✓

ii) $\frac{x^2y^3}{x^1y} \div \frac{8x^3}{y^2}$ → keep flip flip

$= \frac{8x^3y^3}{1} \cdot \frac{y^2}{x^1y}$

$= \boxed{8x^4y^1}$ ✓

iii) $\frac{3m^2n}{2m} \div \frac{3}{m^3n^2}$ → keep flip flip

$= \frac{3m^2n}{2m} \times \frac{m^3n^2}{3}$

reduce ÷3

$= \frac{3m^5n^3}{6m}$

÷3

$= \boxed{\frac{1m^4n^3}{2}}$ ✓

B) Add/Sub Expressions

[hint: $\frac{1}{2}+\frac{3}{2}=\frac{4}{2}=\boxed{2}$ $\quad \frac{1}{5}+\frac{2}{3}=\frac{3}{15}+\frac{10}{15}=\boxed{\frac{13}{15}}$ (×3, ×5, ×3, ×5)]

EX1) $\frac{6}{x}+\frac{7}{x}$

$= \boxed{\frac{13}{x}}$ ✓

EX2) $\frac{19}{5y^2}-\frac{x}{5y^2}$

$= \boxed{\frac{19-x}{5y^2}}$ ✓

EX3) $\frac{x-1}{2}+\frac{x-2}{3}$ (×3, ×2)

FIRST: make common denominators

$= \frac{3(x-1)}{6}+\frac{2(x-2)}{6}$

$= \frac{3x-3}{6}+\frac{2x-4}{6}$

$= \boxed{\frac{5x-7}{6}}$ ✓

EX 4) $\frac{x+1}{2}-\frac{2(x-1)}{5}$ $\quad \frac{2x-2}{5}$ (×5, ×2)

ACTUALLY FIRST: expand if you can, get rid of brackets

Always find a common denominator if you can't get rid of denominators

$$= \frac{5(x+1)}{10} - \frac{2(2x-2)}{10}$$

$$= \frac{5x+5}{10} - \frac{4x-4}{10}$$

$$= \frac{1x+9}{10}$$

CHOICES:

$\frac{1x+1}{10}$ OR $\frac{1x+9}{10}$ ✓

Assignment L2 wkst #27-40 /14 mks