Algebra 2 | Tuesday 4-2-13 | Class Notes

- Homework Review
- (Ex 5) Pg 330

$$\frac{\frac{2}{x}+\frac{x}{4}}{\frac{x+1}{x}}$$

- (Ex 6) train: Avg. = $30\frac{mi}{h}$ to place

  Avg = $40\frac{mi}{hr}$ home

  Find: Avg speed for whole trip

$d = rt$ $\quad H \xrightarrow{d} P$ $\quad \therefore$ total dist. $= 2d$

$r = \frac{d}{t}$

$t = \frac{d}{r} \Rightarrow$ total time $\Rightarrow \frac{d}{30}+\frac{d}{40}$

$\therefore r = \frac{2d}{\frac{d}{30}+\frac{d}{40}}$ (cont)

Ex 5 Pg 330

$$\frac{\frac{2}{x}+\frac{x}{4}}{\frac{x+1}{x}} = \frac{\frac{8+x^2}{4x}}{1} \cdot \frac{x}{x+1}$$

$$* \quad \frac{x^2+8}{4(x+1)} \quad \text{or} \quad \frac{x^2+8}{4x+4}$$

Ex 6

$$\frac{2d}{\frac{d}{30}+\frac{d}{40}} = \frac{2d}{\frac{4d}{120}+\frac{3d}{120}} = \frac{2d}{\frac{7d}{120}}$$

$$\frac{2d}{1} \cdot \frac{120}{7d} = \frac{240}{7} = 34.28$$

$$= 34.3 \ \frac{mi}{hr}$$

Homework Review: Pg 332 #3-15 ODD

(3) $\frac{3x-4}{4x+5} - \frac{5x+3}{4x+5} = \boxed{\frac{-2x-7}{4x+5}}$

$\boxed{x \neq -\frac{5}{4}}$

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(5) $4x^2y^3,\ 16x^4y$

$\boxed{16x^4y^3}$ LCM

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

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

$\frac{6x^2-7x+2+2x^2+9x-18}{(x+6)(2x-1)}$

$\frac{8x^2+2x-16}{(x+6)(2x-1)} = \boxed{\frac{2(4x^2+x-8)}{(x+6)(2x-1)}}$

$\boxed{x \neq -6, \frac{1}{2}}$

(9) $\dfrac{3x-4}{x^2-9} + \dfrac{2x-1}{x+3}$

$\dfrac{3x-4}{(x-3)(x+3)} + \dfrac{2x-1}{(x+3)}$

$\dfrac{3x-4}{(x-3)(x+3)} + \dfrac{(x-3)(2x-1)}{(x-3)(x+3)}$

$\dfrac{3x-4+2x^2-7x+3}{(x-3)(x+3)}$

$\boxed{\dfrac{2x^2-4x-1}{(x-3)(x+3)}} \quad \boxed{x \neq \pm 3}$

(11) $\dfrac{2x+8}{x^2-16} - \dfrac{3}{x-4}$

$\dfrac{2(x+4)}{(x-4)(x+4)} - \dfrac{3}{(x-4)}$

$\boxed{\dfrac{-1}{(x-4)} \quad x \neq \pm 4}$

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(13) $\dfrac{\dfrac{2x-3}{x-2}}{\dfrac{4x-3}{x^2-4}} \cdot \dfrac{(x-2)(x+2)}{4x-3}$

$\boxed{\dfrac{(2x-3)(x+2)}{4x-3}}$

(15) $$\frac{\frac{2}{x}+\frac{1}{x}}{\frac{2x}{x+2}} = \frac{3}{x}\cdot\frac{(x+2)}{2x}$$

$$= \boxed{\frac{3(x+2)}{2x^2}}$$