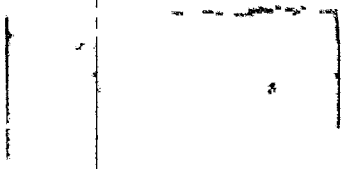
Algebra 2 Weds. 4-3-13 Class Notes

(Ex) trip to Huntsville.
Avg. rate to: 50 mph
Avg. rate from: 60 mph
Avg. rate for whole trip?



$$d = rt \quad \therefore \quad d_{TOTAL} = 2d$$

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

$$\therefore r_{total} = \frac{d_{TOTAL}}{\frac{d}{r_1} + \frac{d}{r_2}} = \frac{2d}{\frac{d}{50} + \frac{d}{60}}$$

$$\frac{2d}{\frac{6d}{300} + \frac{5d}{300}}$$

$$= \frac{2d}{\frac{11d}{300}} = 2d \cdot \frac{300}{11d}$$

$$= \frac{600}{11} = \boxed{54.5 \text{ mph}}$$

Homework Review: Pg. 332 # 2-14 even
16, 31

(14) $\dfrac{\dfrac{3x-7}{4x+5}}{\dfrac{6x-1}{5x-6}} \cdot \dfrac{5x-6}{6x-1} = \dfrac{(3x-7)(5x-6)}{(4x+5)(6x-1)}$

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(6) x^2-25 , $1x^2+10x+25$ LCM

Sum = 10
prod = 25
5 5

$(x-5)(x+5)$, $(x+5)(x+5)$

$(x-5)(x+5)(x+5)$

Ex $\dfrac{1}{4}$, $\dfrac{1}{8}$

$\dfrac{1}{1\cdot 4}$ $\dfrac{1}{2\cdot 4}$

(8) $\dfrac{4x-5}{12x+4} + \dfrac{3x-1}{3x+1}$

$\dfrac{4x-5}{4(3x+1)} + \dfrac{3x-1}{3x+1}$

$\dfrac{4x-5}{4(3x+1)} + \dfrac{4(3x-1)}{4(3x+1)} \Rightarrow 12x-4$

$\dfrac{16x-9}{4(3x+1)} = \boxed{\dfrac{16x-9}{12x+4}}$

(16.) $Y = 6.20 \frac{ft}{s}$ 2 laps $= d$

$= 7.75 \frac{ft}{s}$ 2 laps $= d$

$$\frac{2d}{\frac{d}{6.20} + \frac{d}{7.75}} = \frac{2d}{\frac{d(7.75)}{(6.20)(7.75)} + \frac{d(6.20)}{(6.20)(7.75)}}$$

$$\frac{2 \cdot 1}{\frac{13.95}{48.05}} = \frac{2 \cdot 48.05}{13.95} = 3.444 \frac{ft}{s}$$

$\approx 6.88 \frac{ft}{s}$

$\boxed{6.9 \frac{ft}{s}}$

WS (Worksheet Practice)

(6) $\frac{4y}{4x} - \frac{2x-5y}{5y^2}$

$\frac{20y^3}{20xy^2} - \frac{8x^2-20xy}{20xy^2}$

$\frac{20y^3-8x^2+20xy}{20xy^2}$

$\boxed{\frac{5y^3-2x^2+5xy}{5xy^2}}$

WS (22)

$$\frac{5N}{2} - \frac{N-5}{9N-15}$$

$$\frac{5N}{2} - \frac{N-5}{3(3N-5)} \Rightarrow 9N-15$$

$$\frac{45N^2-75N}{6(3N-5)} - \frac{2N-10}{6(3N-5)}$$

$$\boxed{\frac{45N^2-77N+10}{6(3N-5)}}$$

(41) $\dfrac{25b^2+5b-12}{5b^2-16b-16} \cdot \dfrac{3b^2+8b+4}{15b^2+b-6}$

sum ⇒ 5

30, 10 prod = −300

−15 + 20

$(25b^2-15b)+(20b-12)$

$5b(5b-3)+4(5b-3)$

$(5b-3)(5b+4)$