gebra II/ Trig – In Class Practice

Sec. 8.5- Solving Rational Equations

Name: MS-Brawe

Period: 3

Date: 5/4/17

1.) The U-High baseball team would like to finish the season with a win percentage of at least 75% (or .75). If the team has already won 12 of the 20 games they have played, how many games does the team need to win in a row to have a win percentage of 75%?

$$\frac{12+x}{20+x} = .75$$

$$75(20+x) = 12+$$

.75(20+X) = 12+ X 15+.75X=12+X

$$\frac{-12}{3=.25x}$$
 $x=12$

12 more games.

$$W=r \cdot t$$

 $p=r \cdot t$ $r=\frac{p}{t} t=\frac{p}{r}$

2.) Mr. Neisler can grade the 1:00 Algebra 2 Tests in 4 hours. When Ms. Brauer assists him, they can grade the same number of papers in 2.5 hours. About how long would it take Ms. Brauer to grade the papers by herself?

Mr. Neisler:

M. Brawly:

$$1=r \cdot X$$
 $r=x$

$$(\frac{1}{4}(2.5) + \frac{1}{x}(2.5) = 1)4x$$

$$2.5x + 4(2.5) = 4x$$

$$-2.5x - 2.5x$$

$$-1.5x = -2.5x$$

$$-2.5x - 2.5x$$

$$-2.5x - 2.5x$$

$$-2.5x - 2.5x$$

3.) Working together, it takes Catherine, Jenna, and Lana two hours to paint one room. When Catherine is working alone, she can paint the room in 6 hours; Jenna can paint the room in 4 hours on her own. How long would it take Lana to paint the room on her own?

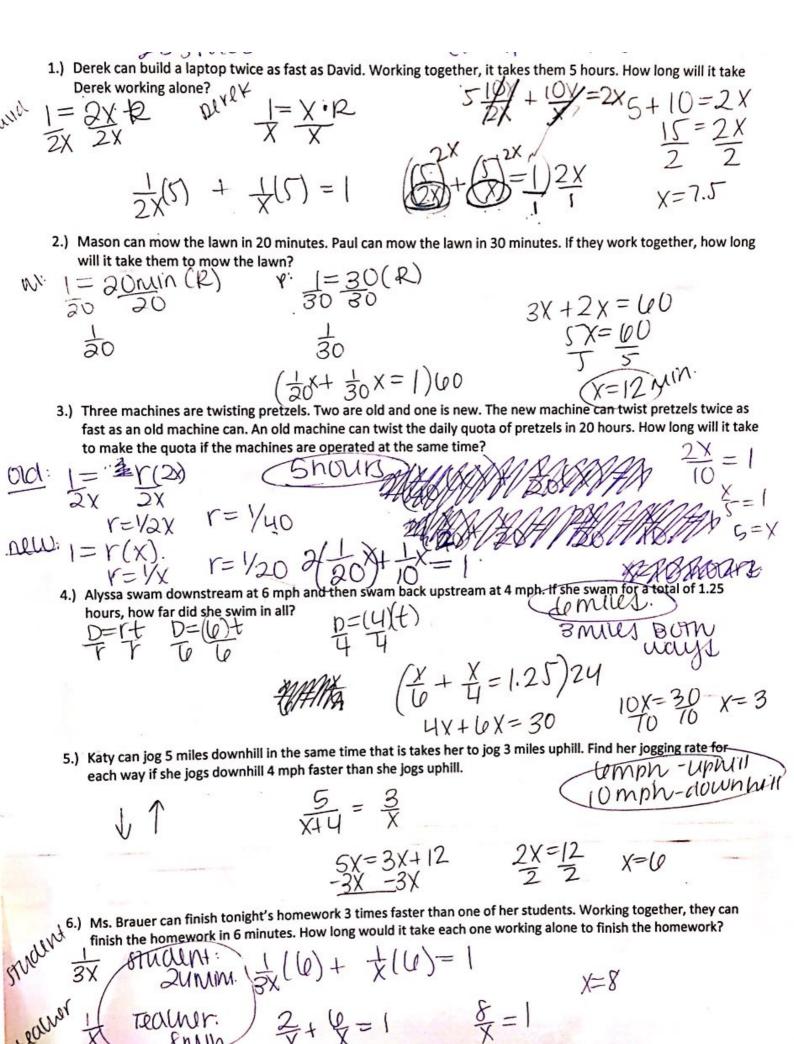
$$\frac{1}{(3+3+12=6)} + \frac{1}{x}(2) = 1$$

$$\frac{1}{(3+3+12=6)} + \frac{1}{x}(2) = 1$$

$$\frac{1}{(3+3+12=6)} + \frac{1}{x}(2) = 1$$

$$\frac{1}{(3+3+12=6)} \times = 1$$

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



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Algebra II/ Trig - Homework

Name: KLU

Sec. 8.5- Solving Rational Equations

Period: 3 7

Date: 5/4/17

1. The pump at the BP gas station can fill Ms. Brauer's new car with gas in 4 minutes. The pump at the Shell can fill the same tank in 3 minutes. If both pumps are used at the same time, how long will it take to fill the tank?

$$(4^{2} + 3^{2} = 1)12$$

 $3x + 4x = 12$
 $7x = 12$
 $7 = 12$
 $7 = 1.7$ Minutes.

2. It takes a person the same time to walk 10 miles as it takes a car to travel 15 miles in heavy traffic. If the car is traveling 3 mph faster than the person is walking, how fast is each traveling?

traveling 3 mph faster than the person is walking, how fast is each traveling?

$$10 = V + \frac{10 + (X) + 1}{X} = V + \frac{15 = (X + 3)(1)}{X + 3}$$
 $10 = V + \frac{15 = (X + 3)(1)}{X + 3} = \frac{15(X)}{(2X + 3)} = \frac{15(X)}{(2X + 3$

3. Brynn put together one-quarter of her Race Paper in 3 hours. If Vishnu works two hours more than Brynn, he can finish one-sixth of the Race Paper. How long would it take to complete 1 Race Paper if they worked together?

$$\frac{1}{3} = 3 (r) \qquad \text{white } \frac{1}{3} = r(s)$$

$$\frac{1}{12} = r$$

$$\frac{1}$$

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Algebra II/ Trig - Practice

Sec. 8.5- Solving Rational Equations

Name: Kly

Period: 3 7

Date: 5/5/17

We-Try

1. It's Allie's turn to drive during the band's road trip to Florida. When it was raining, she drove for 120 miles. When the rain stopped, she drove 20 mph faster than he did while it was raining. She drove for 300 miles after the rain stopped. If Allie drove for a total of 10 hours, how fast did she drive while it was raining?

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If Allie drove for a total of 10 hours, how fast did she drive while it was raining?							
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William Col	not ning		(10)				
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2.000	1001111 O	XXXXX	200	30,410			
4	ke -	1, 2014	X+20	10			
1.5							
$0 = \frac{120}{X} + \frac{300}{X+20}$	\						
120 + 000	141X+201			\			
$10 - \overline{\chi}$ X+20	1/ (// / 20)		1	,			
N.	0.700		1 10/2	2201/ 2	1100 - 0		
10x(x+20) = 1200	V120) - 25	(X)(X)	10X -	-220X -2	900-0		
$10 \times (X+20) = 1200$	X+20) + 31	Detail	11)(V2-	22-240)=()		
$10X^2 + 200X = 12$	UNIT 2 MOOT	300Y	10(x	22 240	/ _O		
101/2 + 200 1- 12	UM 20100	300	10 (X-	30)(X+8)=	=0		
$10x^2 + 200x = 4$	120X+2400)	10 (1	D-D VE	20		
101 7 2000 - 2	400	You- Try	X-3	0=0 X=	50		
-4201 2				1 5 4			
2. On a Trigonometry class trip to Chicago, the students take a boat ride through the Chicago River. The tour boat travels							

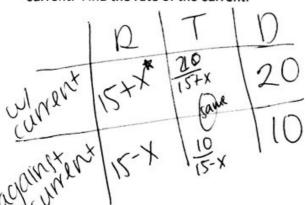
2. On a Trigonometry class trip to Chicago, the students take a boat ride through the Chicago River. The tour boat travel 1.2 miles up a river and 1.2 miles down the river in a total of 1.5 hours. In still water, the boat travels at an average

 $13.2 = 43.375 - 8.25X + 8.25X - 1.5X^{2}$ $-13.2 = 43.375 - 1.5X^{2}$ -43.375 - 43.375 x=4.5 mph

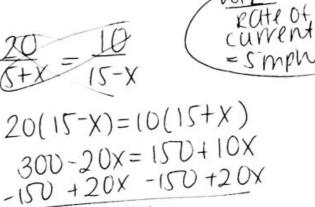
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Group Practice:

3. Trey and Andy are practicing for the 2020 Summer Olympics by creating a canoe team. In still water, they travel 15 mph. Going with the current they can travel 20 miles in the same time that it takes them to travel 10 miles against the current. Find the rate of the current.



$$\frac{20}{15+x} = \frac{10}{15-x}$$



X=(UVVV) \times = $\frac{150}{30}$ = $\frac{300}{30}$ \times = $\frac{1}{30}$ 4. This summer, Ms. Brauer is traveling to London to see her brother. Her jet will travel 3950 miles from Chicago, Illinois, to London, England, and 3950 miles on the return trip. The total flying time is 16.5 hours. The return trip will take longer due to winds that generally blow from west to east. If the jet's average speed with no wind is 485 miles/hour, what is the average speed of the wind during the round-trip flight? Round to the nearest mile per hour.

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	12	IT	10
10	4884	3010	3050
FROM	U85-X	3010 (C)	3050

$$\frac{3957}{1485+x} + \frac{3950}{485+x} = 10.5$$

3950(485-X)+3950(485+X)=

55 mph 3831500

$$(0.5(485+x)(485-x)$$

$$10.5(235225-x^2)$$

$$= 3881212.5-10.5x^2$$

5. Cooper and Christian make paper airplanes and test their flight on the U-High football field Apple calculates that his plane can fly 910 centimeters with the wind. In the same amount of time Christian's can go 660 centimeters against the wind. Assuming both of their airplanes are expertly made (have the same flying capabilities) and the speed of the plane in still air is 305 centimeters per minute. What is the speed of the wind?

660(302+X) = 910(302-X)