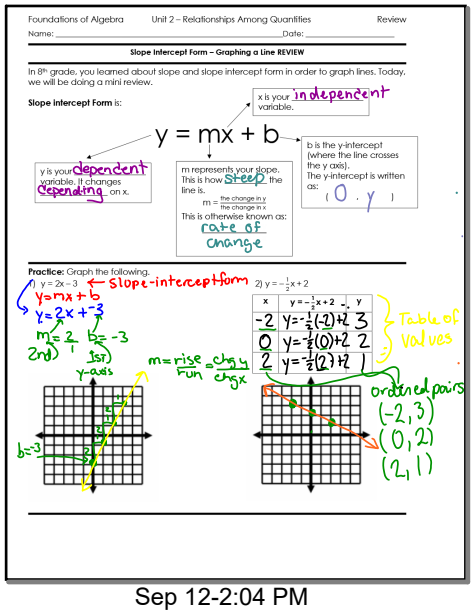
Monday, September 17th, 2018

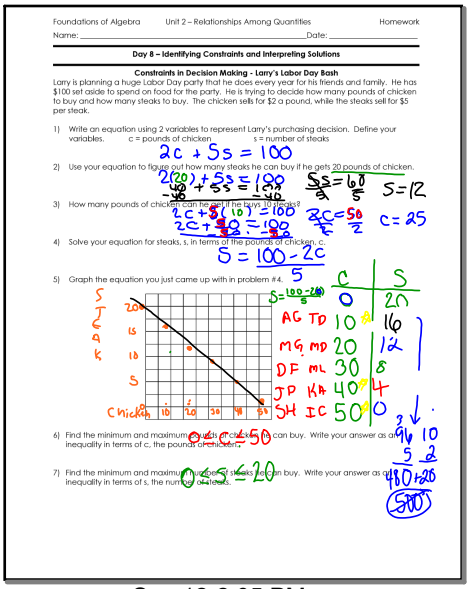
On Monday, 380 students went on a trip to the zoo. All 8 buses were filled and 4 students had to travel in cars. How many students were in each bus ?

Oceanside Bike Rental Shop charges 11 dollars plus 6 dollars an hour for renting a bike. Joan paid 59 dollars to rent a bike. How many hours did she pay to have the bike checked out ?

Sep 16-11:56 AM



Sep 12-2:04 PM



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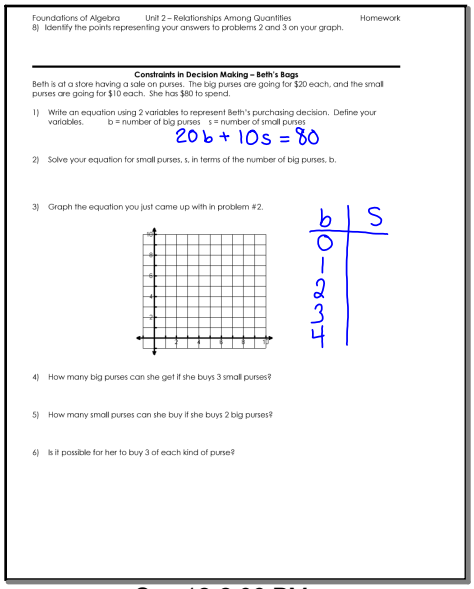


Sep 12-2:06 PM

Sub on 9/18

Rewrite the equation in slope intercept form.

1) $2x - 3y = -6$

2) $6x + y = -1$

3) $9x + y = -5$

4) $x + y = 3$

Sep 17-7:53 AM

Wednesday, September 19th, 2018

Convert the following to slope-intercept form and identify the slope and y-intercept.

$2x + 4y = -24$

$-2x \quad -2x$

$4y = -24 - 2x$

$\frac{4y}{4} = \frac{-2x - 24}{4}$

$y = -\frac{2x}{4} - \frac{24}{4}$

$y = -\frac{1}{2}x + b$

$m = -\frac{1}{2}$

$b = -6$

$-5x - 3y = -12$

$+5x \quad +5x$

$\frac{-3y}{-3} = \frac{5x - 12}{-3}$

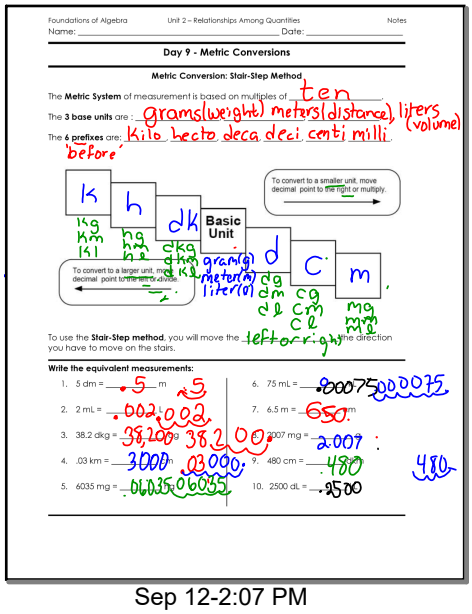
$y = \frac{5}{-3}x - \frac{12}{-3}$

$y = \frac{5}{-3}x + 4$

$m = \frac{5}{-3} \quad b = 4$

Hint: slope intercept from looks like $y = mx + b$

Sep 16-11:56 AM



Foundations of Algebra Unit 2 – Relationships Among Quantities Notes

Name: _____ Date: _____

Day 9 - Metric Conversions

Metric Conversion: Stair-Step Method

The **Metric System** of measurement is based on multiples of ten.

The **3 base units** are : grams(weight) meters(distance) liters (volume)

The **6 prefixes** are: Kilo hecto deca deci centi milli

'before'

k h dk Basic Unit d c m

kg hg dkg g dg cg mg
km hm dam m dm cm mm
kl hl dkl l dl cl ml

To convert to a smaller unit, move decimal point to the right or multiply.

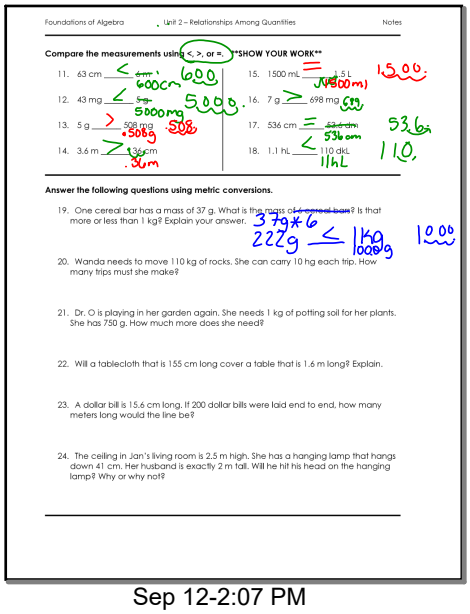
To convert to a larger unit, move decimal point to the left or divide.

To use the **Stair-Step method**, you will move the left or right the direction you have to move on the stairs.

Write the equivalent measurements:

1. 5 dm = .5 m
2. 2 mL = .002 L
3. 38.2 dkg = 38,200 mg
4. .03 km = 3000 cm
5. 6035 mg = .06035 kg
6. 75 mL = .075 L
7. 6.5 m = 650 cm
8. 2007 mg = 2.007 g
9. 480 cm = 4.80 m
10. 2500 dL = .250 kL

Sep 12-2:07 PM



Foundations of Algebra Unit 2 – Relationships Among Quantities Notes

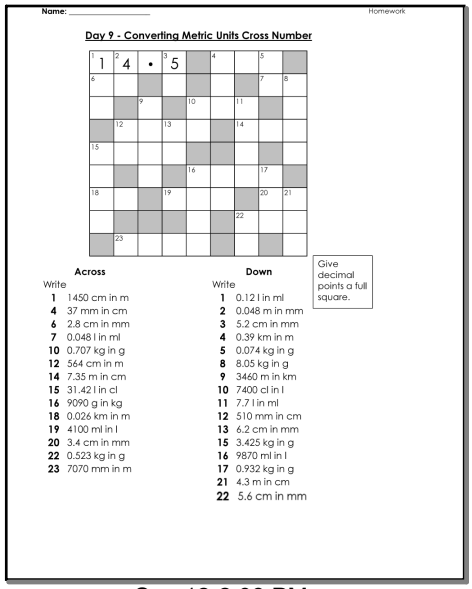
Compare the measurements using <, >, or =. **SHOW YOUR WORK**

11. 63 cm < 600cm
12. 43 mg < 5g 5000mg
13. 5 g > 508 mg
14. 3.6 m > 336 cm
15. 1500 mL = 1.5 L
16. 7 g > 698 mg
17. 536 cm = 5.36 dm
18. 1.1 hL < 110 dkL

Answer the following questions using metric conversions.

19. One cereal bar has a mass of 37 g. What is the mass of 6 cereal bars? Is that more or less than 1 kg? Explain your answer.
20. Wanda needs to move 110 kg of rocks. She can carry 10 hg each trip. How many trips must she make?
21. Dr. O is playing in her garden again. She needs 1 kg of potting soil for her plants. She has 750 g. How much more does she need?
22. Will a tablecloth that is 155 cm long cover a table that is 1.6 m long? Explain.
23. A dollar bill is 15.6 cm long. If 200 dollar bills were laid end to end, how many meters long would the line be?
24. The ceiling in Jan's living room is 2.5 m high. She has a hanging lamp that hangs down 41 cm. Her husband is exactly 2 m tall. Will he hit his head on the hanging lamp? Why or why not?

Sep 12-2:07 PM



Name: _____ Homework

Day 9 - Converting Metric Units Cross Number

Across

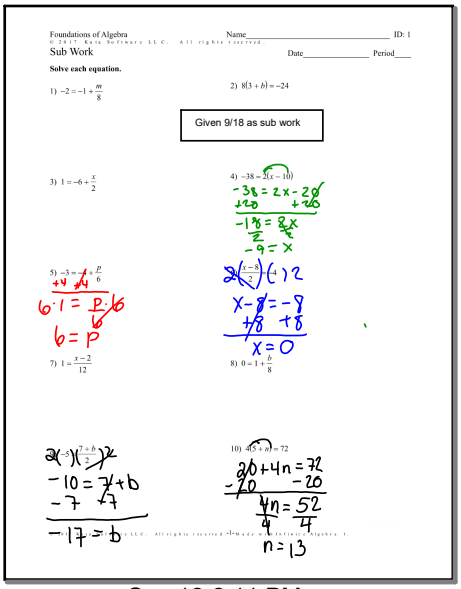
Write
1 1450 cm in m
4 37 mm in cm
6 2.8 cm in mm
7 0.048 l in ml
10 0.707 kg in g
12 564 cm in m
14 7.35 m in cm
15 31.42 l in cl
16 9090 g in kg
18 0.026 km in m
19 4100 ml in l
20 3.4 cm in mm
22 0.523 kg in g
23 7070 mm in m

Down

Write
1 0.12 l in ml
2 0.048 m in mm
3 5.2 cm in mm
4 0.39 km in m
5 0.074 kg in g
8 8.05 kg in g
9 3460 m in km
10 7400 cl in l
11 7.7 l in ml
12 510 mm in cm
13 6.2 cm in mm
15 3.425 kg in g
16 9870 ml in l
17 0.932 kg in g
21 4.3 m in cm
22 5.6 cm in mm

Give decimal points a full square.

Sep 12-2:08 PM



Foundations of Algebra Name_____ ID: 1

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Sub Work Date_____ Period____

Solve each equation.

1) $-2 = -1 + \frac{m}{8}$

2) $8(3 + b) = -24$

Given 9/18 as sub work

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

4) $-38 = 2(x - 10)$

5) $-3 = -4 + \frac{p}{6}$

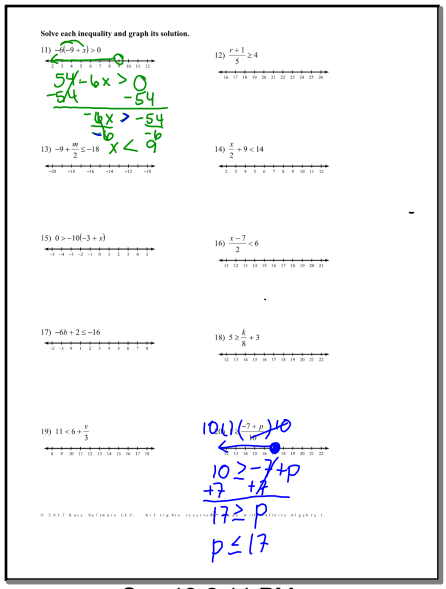
6) $\frac{x-8}{2} = 12$

7) $1 = \frac{x-2}{12}$

8) $0 = 1 + \frac{b}{8}$

10) $4(5 + n) = 72$

Sep 12-2:11 PM



Solve each inequality and graph its solution.

11) $-6(-9 + x) > 0$

12) $\frac{r+1}{5} \geq 4$

13) $-9 + \frac{m}{2} \leq -18$

14) $\frac{x}{2} + 9 < 14$

15) $0 > -10(-3 + x)$

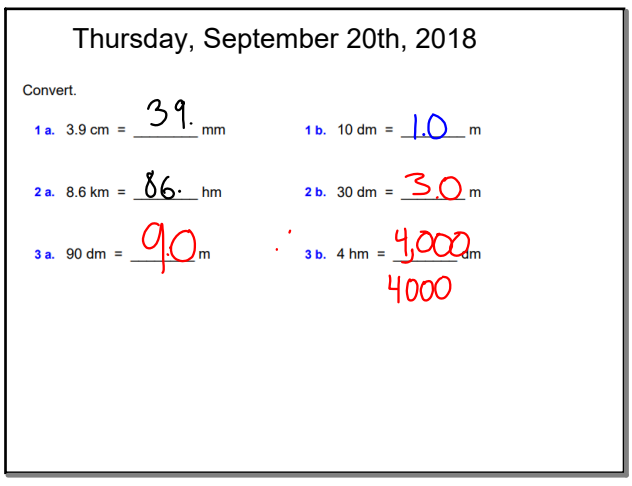
16) $\frac{v-7}{2} < 6$

17) $-6b + 2 \leq -16$

18) $5 \geq \frac{k}{8} + 3$

19) $11 < 6 + \frac{v}{3}$

Sep 12-2:11 PM



Thursday, September 20th, 2018

Convert.

1 a. 3.9 cm = 39. mm

1 b. 10 dm = 1.0 m

2 a. 8.6 km = 86. hm

2 b. 30 dm = 3.0 m

3 a. 90 dm = 9.0 m

3 b. 4 hm = 4,000 dm

4000

Sep 16-11:56 AM

Foundations of Algebra Unit 2 – Relationships Among Quantities Classwork
Name: _____ Date: _____

Day 10 – Metric Conversions and Applications Practice

Answer the following questions using metric conversions.

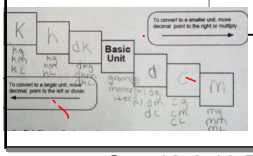
1. Sally is on the All-City track team and has to run the 100-meter dash. How many deka-meters will she run?
100 m
10 dkm
2. Each year, the New York City Marathon which is 42 km, is run by thousands of people. If you and two friends go run the marathon, how many meters will all three of you run?
42 km * 3 = 126 km
126000 m
3. A recipe for shortbread cookies calls for 5 grams of butter to make 12 cookies. How many deci-grams will there be in 60 cookies?
5*12 = 60 g
600dg

Write the equivalent measurements:

4. 65 dm = .0065 km
5. 2500 mL = 2.500 L
6. .58 dkg = 580 cg
7. 580 dL = .580 hL 580dL
8. 150 m = 15000 cm
9. 920 cg = 9.20 g

Compare the measurements using <, >, or =. **SHOW YOUR WORK**

10. 880 cm > 9 m 900cm
11. 5020 mg > 5 g 5000mg
12. 1500 hL > 1.5 L 150 hL
13. 75 g = 7.5 dkg 75 g 7.5
14. 445 cm > 0.0445 dkm
15. 2.1 kL < 221 dkL



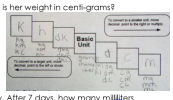
Sep 12-2:12 PM

Foundations of Algebra Unit 2 – Relationships Among Quantities Classwork

Answer the following questions using metric conversions.

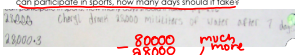
16. Susan's car has a 40 liter gas tank. If it takes four tanks of gas to go to Florida and back, will she have enough gas if she can only afford to buy 2 hecto-liters?
40 * 4 = 160 l
1.6 hl = yes

17. Five year old Michelle weighs 75 deka-grams. What is her weight in centi-grams?



4000 ml

18. The doctor told Cheryl to drink 4 liters of water a day. After 7 days, how many milliliters of water did Cheryl drink? If she has to drink a minimum of 80,000 milliliters before she can participate in sports, how many days should it take?



80000
-28000
52000
4000
much more
= 13 days

19. Nick is on the Hillgrove cross-country team and has to run a 5 km race. How many deka-meters will he run?

20. One energy bar has a mass of 85 g. What is the mass of 12 energy bars? Is that more or less than 1 kg?

Sep 12-2:13 PM

Foundations of Algebra Unit 2 – Relationships Among Quantities Practice
Name: _____ Date: _____

Day 10 - Applications of Metric Conversions

Answer the following questions using metric conversions.

1. There is a jar on the cabinet by the refrigerator. Savannah pours 208 milliliters of water in the jar six times to fill it, how many liters of water does it take to fill the jar?
2. Eric's father asked an engineer to survey the field house behind their house. He wanted to plant some apple and pear trees there. According to the survey, the field is 38 meters long and 17 meters wide. What is the perimeter of the field in kilometers?
3. We have a new guest in our house. He is 0.54 meters long and weighs 4.1 kg. He is our new puppy. The veterinarian said he should gain about 136 grams per week. At that rate, how much, in kilograms, will he weigh in 3 months.
4. There are 6 aluminum cans sitting on the shelf. Each can contains 321 milliliters of soup. Brittany poured all the soup into one bowl. How many liters of soup did she have?
5. Brandon looked at the 10 liter jug of Gruesome Green soda sadly. He had bet his friend that he could drink all of it and new he was sure his stomach would explode if he drank one more milliliter. He had already drunk 3700 milliliters. How much was left in the jug, in liters?

Sep 12-2:13 PM

Name: _____ **Day 10 - More Metric Conversions** Practice

5.1	6700	320	58	3260	58	7.5		75	58	A 3.2	6700	326
	5.8	6.7	8.97	730	58			6700	7.3	75	89.7	58	7.5

Work out the missing number for each question and then write the correct letter above each number in the above box. The first question has been completed.

Write:

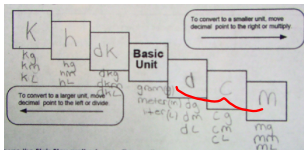
- **A** 3200 ml in l = 3.2 l
- **B** 897 ml in cl
- **E** 0.058 l in ml
- **G** 32.6l in cl
- **H** 67 ml in cl
- **I** 5100 ml in l
- **L** 0.73 l in ml
- **M** 7500 cl in l
- **N** 6.7 l in ml
- **O** 8970 ml in l
- **R** 7500 ml in l
- **S** 3260 ml in cl
- **T** 32 cl in ml
- **U** 73 ml in cl
- **W** 5800 ml in l

Sep 12-2:14 PM

Friday, September 20th, 2018

There is a jar on the cabinet by the refrigerator. Savannah pours 315 milliliters of water in the jar six times to fill it, how many deciliters of water does \ it take to fill the jar?

315 ml * 6 = 1890 ml
1890 ml = 18.90 dL
1890 dL



Sep 16-11:56 AM

Foundations of Algebra Unit 2: Relationships Among Quantities
Name: _____ Date: _____

Unit 2B Quiz #1 Review

Constraints in Decision Making - Larry's Labor Day Bash

Larry is planning a huge Labor Day party that he does every year for his friends and family. He has $100 set aside to spend on food for the party. He is trying to decide how many pounds of chicken to buy and how many steaks to buy. The chicken sells for $2 a pound, while the steaks sell for $10 per steak.

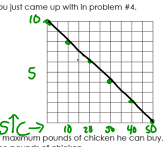
1) Write an equation using 2 variables to represent Larry's purchasing decision. Define your variables.
c = pounds of chicken s = number of steaks
2c + 10s = 100

2) Use your equation to figure out how many steaks he can buy if he gets 25 pounds of chicken.
2(25) + 10s = 100
50 + 10s = 100
-50 -50
10s = 50
10 10
s = 5

3) How many pounds of chicken can he get if he buys 8 steaks?
2c + 10(8) = 100
2c + 80 = 100
-80 -80
2c = 20
2 2
c = 10

4) Solve your equation for steaks, s, in terms of the pounds of chicken, c.
2c + 10s = 100
-2c -2c
10s = 100 - 2c
10 10
s = 100 - 2c
10

5) Graph the equation you just came up with in problem #4.

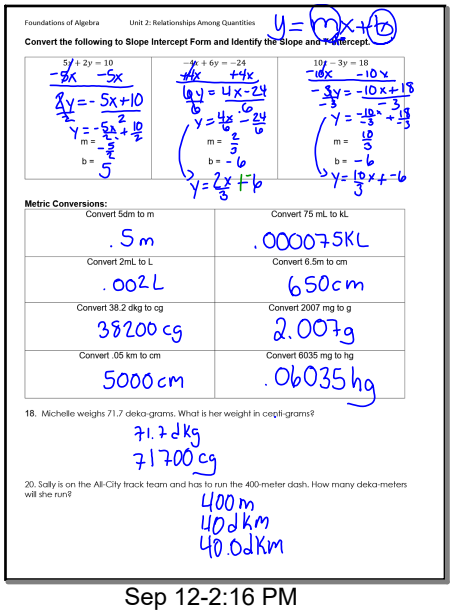


c	s
0	10
10	8
20	6
30	4
40	2
50	0

6) Find the minimum and maximum pounds of chicken he can buy. Write your answer as an inequality in terms of c, the pounds of chicken.
0 ≤ c ≤ 50

7) Find the minimum and maximum number of steaks he can buy. Write your answer as an inequality in terms of s, the number of steaks.
0 ≤ s ≤ 10

Sep 12-2:15 PM



Foundations of Algebra Unit 2: Relationships Among Quantities

$y = mx + b$

Convert the following to Slope Intercept Form and Identify the Slope and Y-Intercept.

$5x + 2y = 10$

$-5x \quad -5x$

$\frac{2y}{2} = \frac{-5x+10}{2}$

$y = -\frac{5}{2}x + \frac{10}{2}$

$m = -\frac{5}{2}$

$b = 5$

$-4x + 6y = -24$

$+4x \quad +4x$

$\frac{6y}{6} = \frac{4x-24}{6}$

$y = \frac{4}{6}x - \frac{24}{6}$

$m = \frac{2}{3}$

$b = -6$

$y = \frac{2}{3}x + b$

$10x - 3y = 18$

$-10x \quad -10x$

$\frac{-3y}{-3} = \frac{-10x+18}{-3}$

$y = \frac{-10}{-3}x + \frac{18}{-3}$

$m = \frac{10}{3}$

$b = -6$

$y = \frac{10}{3}x + -6$

Metric Conversions:

Convert 5dm to m: .5 m	Convert 75 mL to kL: .000075KL
Convert 2mL to L: .002L	Convert 6.5m to cm: 650cm
Convert 38.2 dkg to cg: 38200 cg	Convert 2007 mg to g: 2.007g
Convert .05 km to cm: 5000 cm	Convert 6035 mg to hg: .06035 hg

18. Michelle weighs 71.7 deka-grams. What is her weight in centi-grams?

71.7 dkg

71700 cg

20. Sally is on the All-City track team and has to run the 400-meter dash. How many deka-meters will she run?

400 m

40 dkm

40.0 2km

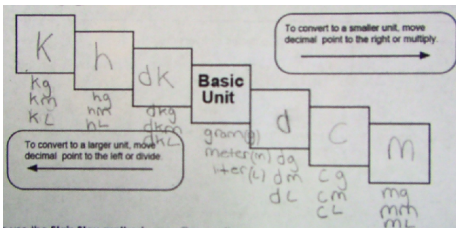
Sep 12-2:16 PM

Slope-intercept form

$y = mx + b$

Use this!

quiz



5)

C	S
0	
5	
10	
15	
20	
25	

Sep 20-9:52 AM

Sep 21-9:59 AM