

January 3, 2019, Thursday

Welcome!

I am Mrs. Cole.

Please find your seat.

Start your pre-test.

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$8x^1(x^1+10)$

Eyeopener
Syllabus
rules

Simplify each expression.
1) $-3x + 3x = 0x = 0$
2) $8x^1 + 10 = 8x^2 + 80x$

Solve each equation.
3) $-8(x+7) = -112$

Solve each equation for the indicated variable.
4) $u = \frac{k}{a}$ for a

$a(u) = \frac{k}{a} \cdot a$
 $\frac{au}{a} = \frac{k}{a} \cdot a$
 $a = \frac{k}{u}$

$-8(x+7) = -112$
 $-8x - 56 = -112$
 $+56 \quad +56$
 $-8x = -56$
 $\frac{-8x}{-8} = \frac{-56}{-8}$
 $x = 7$

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GSE Algebra I Unit 1 - Relationships Among Quantities Day 1 Algebra Review

Name: _____ Date: _____

Simplify each expression: (combine like terms)

1. $8p + 4p = 12p$
2. $8n - 4n = 4n$

3. $-14(3-2x) = -42 + 28x$
4. $4 + 5(-20+3) = 4 - 100 + 15 = -81$

Solve each equation for the given variable:

5. $k + 4 = 8 \Rightarrow k = 4$
6. $20 = 19x \Rightarrow x = \frac{20}{19}$

7. $-13p = 0 \Rightarrow p = 0$
8. $x + 29 = -2 \Rightarrow x = -31$

9. $8 = 4x - 6x \Rightarrow 8 = -2x \Rightarrow x = -4$
10. $6 + 2x = 4x + 4 \Rightarrow 2 = 2x \Rightarrow x = 1$

11. $-2(-2b - 3(2b - 1)) = 4b + 12 \Rightarrow 4b + 12 = 4b + 12$
12. $22 = 2b - 6m + 2 \Rightarrow 20 = 2b - 6m$

13. $7(x-7) = 24 = 4b \Rightarrow x = \frac{24}{7} + 7$
14. $7(x-7) = 24 = 4b \Rightarrow x = \frac{24}{7} + 7$

15. $\frac{1}{2}x + 3 = 7 \Rightarrow \frac{1}{2}x = 4 \Rightarrow x = 8$

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GSE Algebra I Unit 1 - Relationships Among Quantities Day 1 Algebra Review

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Simplify:

17. $5(8 - 2) = 2$
18. $3 + 4(20 - 1) = 2^2$

19. If $a = 2$, $b = -5$ and $c = -3$, evaluate $ab^2 - 2c$

Define a variable. Set up an equation. Solve the equation. Make sure you answer the question.

20. The sum of 38 and twice a number is 124. Find the number.

21. A rectangle is 12m longer than it is wide. Its perimeter is 68m. Find its length and width.

22. Find three consecutive integers whose sum is 171.

23. Alex has twice as much money as Jennifer. Jennifer has \$6 less than Shannon. Together they have \$54. How much money does each have?

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January 4, 2019, Friday

Solve each equation.

5) $164 = -4(1 - 7b)$
 $164 = -4 + 28b$
 $+4 \quad +4$
 $168 = 28b$
 $\frac{168}{28} = \frac{28b}{28}$
 $6 = b$

6) $5 = p - 7$
 $+7 \quad +7$
 $12 = p$

Solve each proportion.

7) $\frac{5}{10} = \frac{4}{x}$
 $7) \times \frac{5}{10} = \frac{4}{x} \times \frac{5}{10}$
 $\frac{10}{8} \times \frac{5}{10} = \frac{4}{x} \times \frac{5}{10}$
 $x = 8$

Solve each equation for the indicated variable.

8) $g = y - \frac{c}{x}$ for x

$x(g - y) = -\frac{c}{x}$
 $x(g - y) = -\frac{c}{x}$
 $x = \frac{-c}{g - y}$

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GSE Algebra I Unit 1 - Relationships between Quantities Day 2 Notes

Name: _____ Date: _____

Metric Conversions

Metric Conversion: Stair-Step Method

The Metric System of measurement is based on multiples of 10.

The 3 base units are: kilo, hecta, deca, deci, centi, milli.

The 4 prefixes are: kilo, hecta, deca, deci, centi, milli.

King Henry Died By Drinking Chocolate Milk

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.

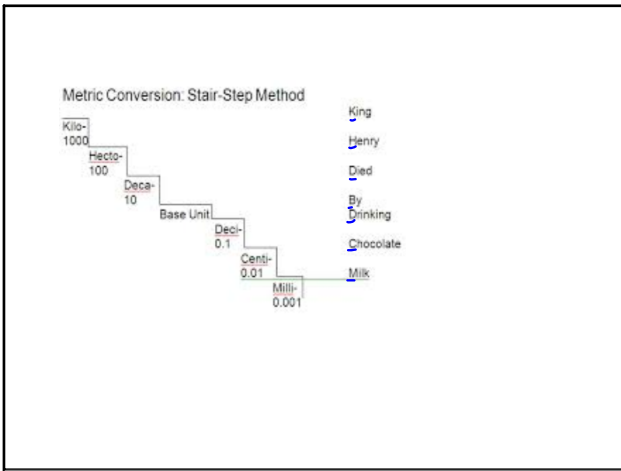
To use the Stair-Step method, you will move the decimal the direction you have to move on the stairs.

Write the equivalent measurements:

1. 5 dm = 50 cm
2. 38,200 mg = 38.2 g
3. 2500 dL = 250 L
4. 2 mL = 2000 μ L
5. 03 km = 3000 m

6. 6035 mg = 6.035 g
7. 75 mL = 0.075 L
8. 6.5 m = 6500 cm
9. 2007 mg = 2.007 g
10. 480 cm = 4.80 m

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GSE Algebra 1 Unit 1 – Relationships between Quantities Day 2 Notes

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

1) 63 cm $<$ 6 m
 2) 43 mg $<$ 5 g
 3) 5 g $>$ 500 mg
 4) 3.6 m $>$ 36 cm

5. 15,1500 mL $=$ 1.5 L
 16. 7 g $>$ 698 mg
 17. 536 cm $=$ 53.6 dm
 18. 1.1 m $<$ 110 dm

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 kg each trip. How many trips must she make?
 110 kg / 10 kg = 110 trips

21. Dr. O is playing in her garden. She needs 1 kg of potting soil for her plants. She has 750 g. How much more does she need?
 1000 g - 750 g = 250 g

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?

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GSE Algebra 1 Unit 1 – Relationships between Quantities Homework

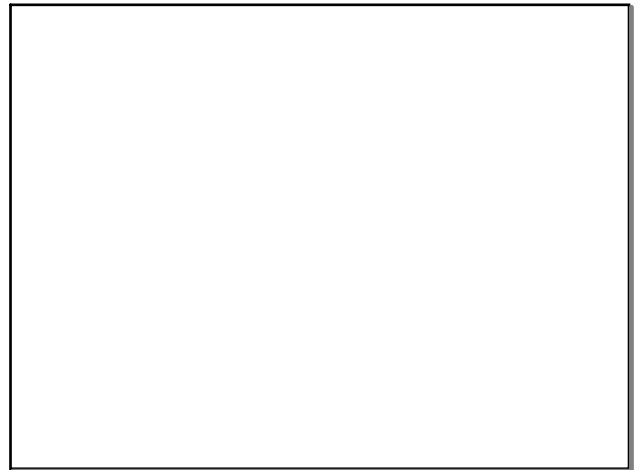
Name: _____ Date: _____

Metric Conversions Homework

Answer the following questions using metric conversions.

- Sally is on the All-City track team and has to run the 100-meter dash. How many decameters will she run?
- 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?
- A recipe for shortbread cookies calls for 5 grams of butter to make 12 cookies. How many decigrams will there be in 60 cookies?
- 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 hectoliters?
- Five-year-old Michelle weighs 75 decagrams. What is her weight in centigrams?
- 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?

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