Slide 1

January 3, 2019, Thursday

Welcome!

I am Mrs. Cole.

Please find your seat.

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Slide 2

Eyeopener

Syllabus

Rules

Simplify each expression.

1) $-3x + 3x$

2) $8x(x + 10)$

Solve each equation.

3) $-8(x + 7) = -112$

Solve each equation for the indicated variable.

4) $u = \dfrac{k}{a}$, for a

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Slide 3

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

Name: _____   Date: _____

Simplify each expression: (combining like terms!)

1. $8p + 4p$ → $12p$

2. $8n - 4n$ → $4n$

3. $-1 + 3(1 - 6x)$ → $-1 + 3 - 18x$ → $2 - 18x$

4. $4 + 6(-2n + 3)$ → $4 - 16n + 24$ → $28 - 16n$ → $-16n + 28$

Solve each equation for the given variable:

5. $k + 4 = 8$ → $k = 4$

6. $20 = 19 - n$ → $n = -1$

7. $-13 + p = 0$ → $p = 13$

8. $x + 28 = -2$ → $x = -30$

9. $8 = 4x - 6x$ → $y = -4$

10. $6 + 2x = 4x - 4$ → $x = 5$

11. $-21 - 2b = -3(2b - 1)$ → $-21 - 2b = -6b + 3$ → $+6b \ +6b$ → $-21 + 4b = 3$ → $+21 \quad +21$ → $4b = 24$ → $\dfrac{4b}{4} = \dfrac{24}{4}$ → $b = 6$

12. $22 - 2a = -6a + 6$ *Find 5 more to complete!*

13. $\dfrac{x}{7} = \dfrac{c}{4}$ ... $\dfrac{7(r)}{r = 3}$

15. $\dfrac{a}{10} = 9$ → $a = 90$

16. $\dfrac{1}{2}x + 3 = 7$ → $-3 \ -3$ → $2(\frac{1}{2}x) = (4)2$ → $x = 8$

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Slide 4

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

Name: _____   Date: _____

Simplify:

17. $5(8 - 2^2) \div 2$

18. $3 + 4(20 - 11) \div 2^3$

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?

(no timestamp)

Slide 5

January 4, 2019, Friday

Solve each equation.

5) $164 = -4(1 - 7b)$

6) $5 = p - 7$

Solve each proportion.

7) $\dfrac{5}{10} = \dfrac{4}{x}$

Solve each equation for the indicated variable.

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

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Slide 6

GSE Algebra I   Unit 1 – Relationships between Quantities   Day 2 Notes
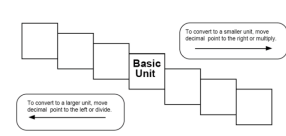
Name: _____   Date: _____

Metric Conversions

Metric Conversion: Stair-Step Method

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

The **3 base units** are : _____.

The **6 prefixes** are: _____, _____, _____, _____, _____, _____.

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

Basic Unit

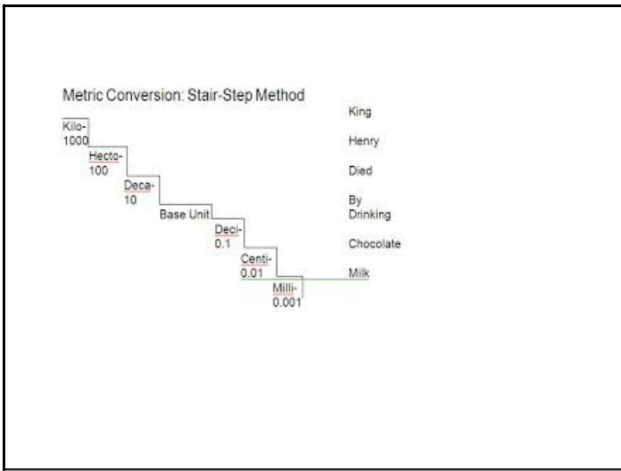To convert to a larger unit, move decimal point to the left or divide.

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

Write the equivalent measurements:

1. 5 dm = _____ m

2. 38.2 dkg = _____ cg

3. 2500 dL = _____ kL

4. 2 mL = _____ L

5. .03 km = _____ cm

6. 6035 mg = _____ hg

7. 75 mL = _____ kL

8. 6.5 m = _____ cm

9. 2007 mg = _____ g

10. 480 cm = _____ dkm

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Metric Conversion: Stair-Step Method

```
Kilo-
1000
    Hecto-
    100
        Deca-
        10
            Base Unit
                Deci-
                0.1
                    Centi-
                    0.01
                        Milli-
                        0.001
```

King
Henry
Died
By Drinking
Chocolate
Milk

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

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

11. 63 cm _____ 6 m
12. 43 mg _____ 5 g
13. 5 g _____ 508 mg
14. 3.6 m _____ 36 cm

15. 1500 mL _____ 1.5 L
16. 7 g _____ 698 mg
17. 536 cm _____ 53.6 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?

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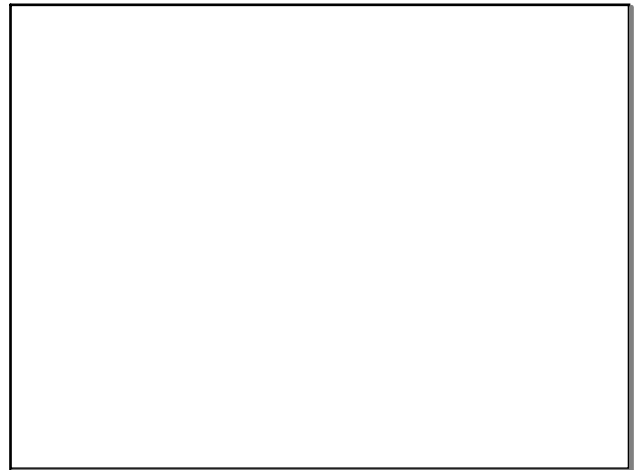GSE Algebra I   Unit 1 – Relationships between Quantities   Homework

Name: _____   Date: _____

Metric Conversions Homework

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 decameters will she run?

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?

3. A recipe for shortbread cookies calls for 5 grams of butter to make 12 cookies. How many decigrams will there be in 60 cookies?

4. 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?

5. Five-year-old Michelle weighs 75 decagrams. What is her weight in centigrams?

6. 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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