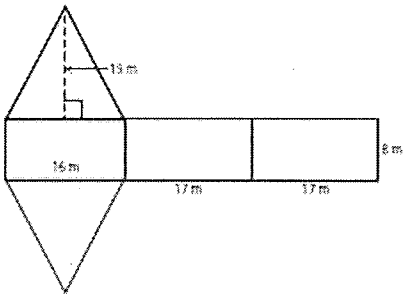
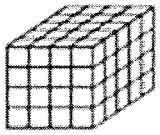
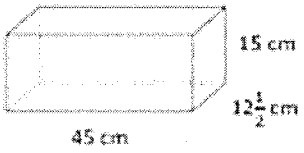
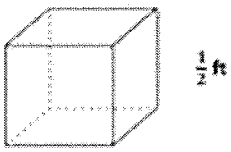
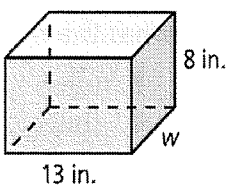
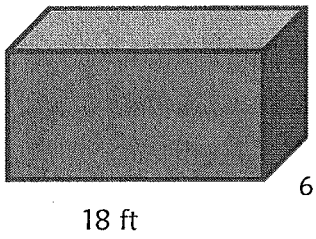
Name: _____ Date: _____

Homework Packet for Week of January 4th.

All homework must be completed in your homework Notebook.

Day	Homework
Tuesday	**1.** A rectangular prism has a base that is 6 meters by 3.5 meters, and the prism is 9 meters high. What is the surface area of the prism? **2.** The diagram represents the net of a triangular prism. Chris wants to find the surface area. First, he finds the area of the two triangles by calculating $0.5 \times 16 \times 15 \times 2$. Next, he finds the area of the three rectangles by calculating $17 \times 8 \times 3$. Finally, he adds the areas of the triangles and rectangles to get a total surface area of 648 square meters. Chris makes an error when finding the surface area. Identify the error Chris makes and explain how to correctly calculate the surface area.  _____ _____ _____ **3.** Yolanda used the expression $\left(\frac{1}{2} \cdot 12 \cdot 10\right) + \left(\frac{1}{2} \cdot 8 \cdot 12\right) + (12 \cdot 8)$ to find the surface area of the pyramid. What is wrong with the expression? Correct Yolanda's mistake. _____ _____
Wednesday	Solve each problem. **1). Find the Volume.**  **2). Find the Volume.**  **3). Find the volume.**  **4). Find the volume.**  **5.** The rectangular prism has a volume of 936 cubic inches. a) Write an equation that would help you find the missing dimension of the prism. 

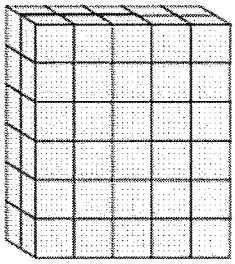
Thursday

1. 

Surface Area = _____ Volume = _____

2. The volume of a rectangular gift box is 98 square inches. The height is 4 inches and the width is $3\frac{1}{2}$ inches. What is the length of the gift box?

3. Thomas and Gianna are building solid rectangular prisms with 1-inch unit cubes. Thomas's prism is shown at the right.



Part A

What is the volume of Thomas's prism?

Show your work.

Answer: _____ cubic inches

Part B

Gianna builds a solid rectangular prism that has the same volume as Thomas's rectangular prism. The bottom layer of Gianna's prism is shown below.

How many layer(s) does Gianna's rectangular prism have? Explain.

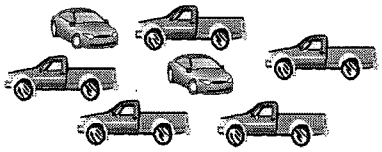
_____

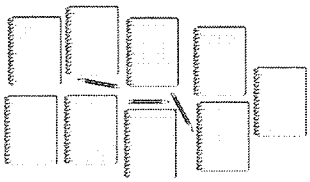
_____

Friday

Write the ratio in two ways. Explain what the ratio means.

1. flies to lizards 

2. cars : trucks 

3. notebooks : pencils 

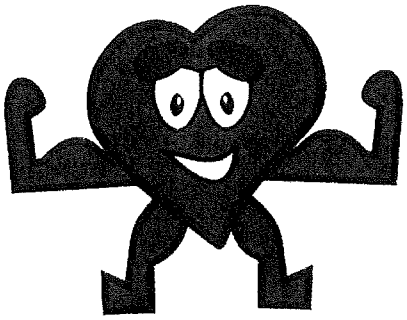
4. hamburgers to hot dogs 

Use the table to write the ratio. Explain what the ratio means.

5. tubas : flutes
6. trumpets : tubas
7. flutes : tubas
8. trumpets : flutes

Instrument	Number
Tubas	2
Flutes	5
Trumpets	3

Fitness Guru

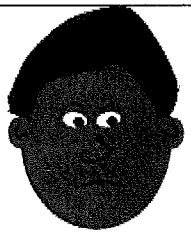


Although magic diet pills seem appealing for some, nothing can replace good ol' physical activity. A good fitness plan helps burn excess calories, improves long-term health and increases self-confidence. Activity might look different from person to person, but the point is to find something you enjoy doing and DO IT. You burn calories by doing practically anything, but the big question is do you burn enough to reach your personal fitness goals? Do you want to gain 5 pounds? Lose 5 pounds? Stay the same?

Using the data on the handout "The Burn Chart" help the five people write and graph inequalities to determine if they will burn enough calories to reach their goal.

If a person is in between two weights on the Burn Chart, use the data for the lower weight.

Name _____ Date _____ Period _____



Bao

H: 5'9" W: 245

Age: 29 **Computer Engineer**

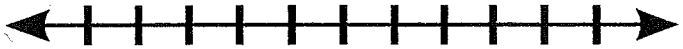
Calories Consumed:
3340

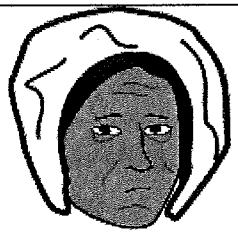
GOAL: Burn 3500 cals

Sitting Office Work	6 hrs
Slow Walking	1 hr
Judo	x hrs

Inequality

How many hours will Bao need to spend at Judo to meet his goal?





Cheryl

H: 5'6" W: 175

Age: 53 **Part-time Secretary**

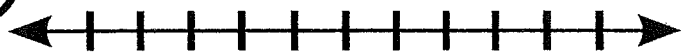
Calories Consumed:
2500

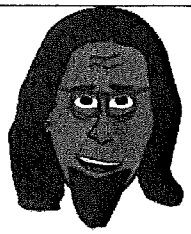
GOAL: Burn 2500 cals

Sitting Office Work	4 hrs
Tennis	2 hrs
Swimming Leisure	x hrs

Inequality

Cheryl plans to go swimming at the local rec center. If she leisurely swims for 2 hours will she meet her calorie goal? Does she need to swim "competitively"?





Pete

H: 6'6" W: 235

Age: 31 **Furniture Mover**

Calories Consumed:
2862

GOAL: Burn 2800 cals

Carrying heavy Loads	5 hrs
Sitting	2 hrs
Mowing the Lawn	2 hrs

Inequality

Pete plans to mow after work. He has another two hours in the evening, can he watch TV or does he need something else to meet his goal?

Teddy

H: 5'7" W: 195

Age: 21 **Cashier**

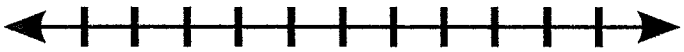
Calories Consumed:
4842

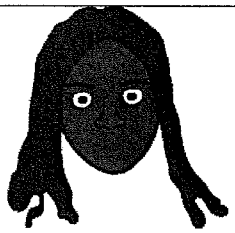
GOAL: Burn 5000 cals

Standing	6 hrs
Carrying heavy Loads	1 hrs
Sitting	2 hrs
Ice Hockey	x hrs

Inequality

After work Teddy plans to go to hockey practice. How many hours does Teddy need to play to meet his goal?





Chloe

H: 6'0" W: 145

Age: 31 **Teacher**

Calories Consumed:
3689

GOAL: Burn 4000 cals

Standing	5 hrs
Walking slow	2 hrs
Sitting	3 hrs
Carrying Infant	2 hrs
Backpacking	x hrs

Inequality

After work Chloe takes care of her newborn baby. Her family decides to go on a backpacking hike. How many hours does this need to be for Chloe to reach her goal?

EXTENSION: Burning calories takes more work than you'd think. Eating a Big Mac is about the equivalent of running, playing touch football or baling hay for an hour. Based on this activity and the **Burn Chart,** estimate an ordinary school day for you. How many calories would you burn?

Finding Equations of Lines

Find the equation of the line given the following information.

Slope and y-intercept:

1. m = 3, point (0, 7)
2. m = $\frac{2}{5}$, point (0, 1)
3. m = $\frac{1}{3}$, point (0, -3)
4. m = $-\frac{4}{3}$, point (0, -12)
5. m = 2.1, point (0, 3.5)
6. m = -5.9, point (0, -25.9)

Slope and point – non y-intercept:

7. m = - 4, point (1, 3)
8. m = $-\frac{3}{4}$, point (- 4, -1)
9. m = $\frac{2}{9}$, point (5, 2)
10. m = $\frac{1}{6}$, point (8, - 3)
11. m = 7, point (2, 11)
12. m = $\frac{1}{5}$, point (3, 4)

Two points:

13. (1, 5) and (-2, -4)
14. (-3, -1) and (0, -2)
15. (11, 14) and (14, 12)
16. (2, 7) and (3, 10)
17. (-5, 4) and (-6, 0)
18. (2, 5) and (6, 6)