

Hello and welcome to Young Women's College Preparatory Academy!

In this packet you will find practice problems for students to work on over the summer. All of these concepts should have been covered and mastered in fifth grade. This packet is due the 2<sup>nd</sup> week of school and will count as a percentage towards the first semester grade.

***Concepts covered in this packet:***

Measurement

Patterns and Functions

Estimation

Data and Statistics

Decimals and Fractions

### A Glacier in Col Ferret

1. Glaciers form when snow accumulates faster than it melts and thus becomes compacted into ice under the weight of more snow. Once the ice reaches the thickness of about 18m., it begins to flow. If ice were to accumulate at a rate of 0.0072 m per year, how long would it take to start flowing?
2. An alpine glacier is estimated to be flowing at a rate of 4.75 m per day. At this rate, how long will it take for a marker placed on the glacier by a researcher to move 1, 140 m?
3. If the Muir Glacier in Glacier Bay, Alaska, retreats at an average speed of 0.73 m per year, how long will it take to retreat a total of 7.9 m? Round your answer to the nearest year.

Location	Thickness (m)
A	180.23
B	160.5
C	210.19
D	260
E	200.22

4. The table above shows the thickness of a glacier as measured at five different points using radar. What is the average thickness of the glacier?
5. The Harvard Glacier in Alaska is advancing at a rate of about 0.055 m per day. At this rate, how long will it take the glacier to advance 20 m? Round your answer to the nearest hundredth.

## Read All About It!!!!

Most Americans read a newspaper at least once a week. In fact, about 55 million newspapers are sold in the United States each day. The table below shows the approximate daily circulation of some of the most popular U.S. newspapers

### U.S. Newspaper Circulation

Newspaper	Daily Circulation (Millions)
Chicago Tribune	0.681
Daily Morning News	0.51
Houston Chronicle	0.553
Los Angeles Times	0.915
New York Post	0.652
New York Times	1.12
San Francisco Chronicle	0.513
Wall Street Journal	2.09

1. Order the newspapers from least daily circulation to greatest.
2. Estimate the total circulation of the eight newspapers. Explain how you made your estimate.
3. The Wall Street Journal, the New York Times and the New York Post are all published in New York. What is the total circulation for these newspapers?
4. The circulation of USA Today is about 4.2 times the circulation of the San Francisco Chronicle. Find the circulation of USA Today.

## ***Patterns and Functions***

***Fact: Roller Coaster designers use mathematics to make roller coasters safe and fun to ride.***

1. Use the internet to research the names of the 5 tallest roller coasters in the world.
2. Determine how much faster the fastest roller coaster is than the fifth fastest roller coaster.
3. Determine how much taller the tallest roller coaster is than the second tallest roller coaster.

### *Going for a Ride*

Shauna and her family are planning to spend a day at a local amusement park. The park charges an admission fee and sells tickets for the rides. The table below can be used to determine how much Shauna and her family could spend in a day at the park.

Complete the table.

Number of rides	Rule	Cost
0		\$8
1	$8 + 3(1)$	\$11
2		\$14
3	$8 + 3(3)$	
4		\$20
6	$8 + 3(6)$	
8		\$32
12		\$44

### ***Going for a Ride (Continued)***

Use the completed table to answer the following questions.

1. What is the park's admission fee? How much does it cost to go on each ride?
3. Find the cost of 14 rides.
4. On a sheet of graph paper, make a graph that shows the cost as a function of the number of rides.
5. The park offers a flat-rate "ride all day" pass for \$38. Explain when this is a better deal than paying for each individual ride.
6. Shauna and her brother each plan to go on 15 rides. Her parents will each go on 6 rides. Find the cost for the family to go to the park. Explain your answer.

### ***Racing against the clock***

You want to see a movie that starts at 3:00 P.M. It takes 0.5 hour to get to the movie theater from your house. Before leaving you need to finish your homework, clean your room and help wash the dishes. Your homework will take you 1.5 hours to finish, cleaning your room will take 0.75 hour, and helping wash the dishes will take 0.5 hour. If it is now 12:00 noon, do you have enough time to be at the movie theater by 3:00 P.M.? Explain your reasoning.

### ***Summer Vacation***

During summer vacation, Ricardo will go to the space camp and then to visit his relatives. He will be gone for 5 weeks and 4 days and will spend 11 more days with his relatives than at space camp. How long will Ricardo stay at each place?