

# Integers in the Real World

Name(s): \_\_\_\_\_

In this lab you will be using integers to express real-world data.

## **Example:** Extreme Temperatures

The hottest temperature ever recorded on Earth was a balmy 136 degrees Fahrenheit recorded in a city in Libya. The coldest temperature ever recorded on Earth was a chilly 129 degrees Fahrenheit below zero recorded at an Arctic weather station.

1. What integer represents the hottest temperature ever recorded? 136
2. What integer represents the coldest temperature ever recorded? -129
3. What numeric expression represents the difference between the hottest and coldest temperatures ever recorded? 136 - (-129)
4. What is the difference between the hottest temperature ever recorded on Earth and the lowest temperature ever recorded on Earth? 265

## **Exercises Part 1: Elevation**

The highest elevation on Earth is at Mount Everest. It is 29,035 feet (8850 meters) above sea level. The lowest is the Bentley Subglacial Trench. It is 8327 feet (2555 meters) below sea level.

1. What integer represents the highest elevation on Earth? \_\_\_\_\_
2. What integer represents the lowest elevation on Earth? \_\_\_\_\_
3. What numeric expression represents the difference between the highest and lowest elevation? \_\_\_\_\_
4. What is the elevation difference between the highest elevation on Earth and the lowest elevation on Earth? \_\_\_\_\_

## Part 2: The Stock Market

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The Dow-Jones Industrial Average (or “The Dow”) is a number that tracks the overall progress of the stock market. If stocks are generally doing well, then the Dow goes up. If stocks are overall doing poorly, the Dow goes down. In a typical week, news about the stock market will be reported something like this...

Monday: “The Dow is up 125 points.”  
Tuesday: “The Dow is down 73 points.”  
Wednesday: “The Dow is down 46 points.”

Thursday: “The Dow is up 158 points.”  
Friday: “The Dow is down 89 points.”

1. Choose an integer to represent the stock market’s progress for every day of the week:

Monday: \_\_\_\_\_

Thursday: \_\_\_\_\_

Tuesday: \_\_\_\_\_

Friday: \_\_\_\_\_

Wednesday: \_\_\_\_\_

2. What numeric expression represents the overall change in The Dow for the whole week? \_\_\_\_\_
3. What was the overall result for the week? \_\_\_\_\_
4. What is the average change in the stock market for the 5 days? \_\_\_\_\_

## Part 3: Temperature

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The following table gives some information about the **normal temperature on the sunny side (°C)** for each of the planets in our solar system.

Planet	Earth	Jupiter	Mars	Mercury	Neptune	Saturn	Uranus	Venus
Temperature	20	-150	-20	430	-220	-180	-210	474

1. What numeric expression represents the *average* of all the normal temperatures of the planets?
2. What is the average normal temperature of all the planets? \_\_\_\_\_