Barometric Pressure on a Weather Map

The common units for barometric pressure reported on television are inches of mercury, but weather maps show barometric pressure in units called ***millibars***. A comparison of millibars(mb) and inches of mercury can be found on **page 13** of the Earth Science Reference Tables.

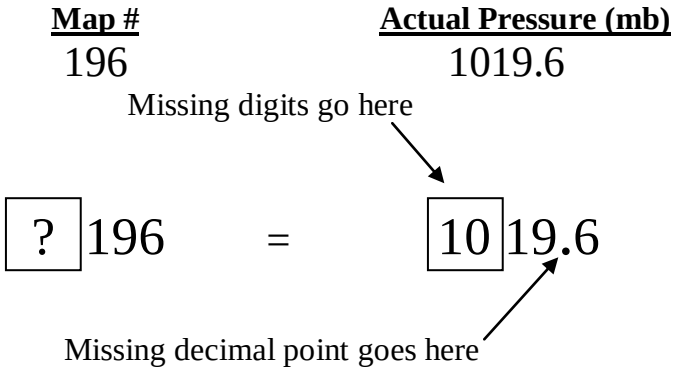
The normal range for barometric pressure on Earth is about **28.5 to 30.7 inches** of mercury. This range corresponds to approximately **965 mb to 1040 mb**. Any measurement above or below this range is very rare. Sea level pressure, also called **1 atmosphere** pressure is about **29.92 inches** of mercury or approximately **1013.0 mb**.

As stated in the first paragraph, weather maps indicate pressure in millibars. However, since there is so much information that has to be squeezed into a small area on a weather map for each city, **there is not enough room for the decimal point or all of the digits** required for the barometric pressure. So what do meteorologists do? They take short cuts and leave out the decimal point and some of the digits.

> ***You have to remember that the decimal is missing.***
>
> ***You have to remember to put back the missing digits.***

Look at the "Weather Map Information" on page 13 of the reference tables.

The example shows the digits, **196**, for the barometric pressure. This value would be impossible in either millibars or inches of mercury. The actual pressure indicated by this number is **1019.6 mb**. How can 196 = 1019.6 ? *They can be equal if the missing digits and decimal point are put back where they belong*.



1. The decimal point **always** belongs **between the last two digits** of the map number.

2. If the **first digit** of the map number is **>5**, the missing number is a **9**.

3. If the **first digit** of the map number is **<5**, the missing number is a **10**.

Examples:

012 = 1001.2 mb 120 = 1012.0 mb 648 = 964.8 mb 789 = 978.9 mb

Name:_____Date:_____Period:_____

Practice:

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Complete the following table:

Weather Map	Actual Pressure
220	
960	
	1032.0
	992.5
242	
	1016.4