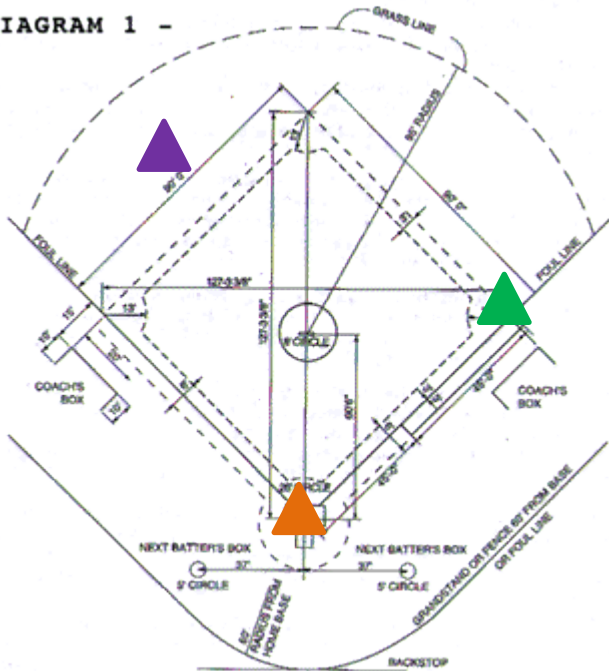


# isotope

/ˈɪsəˌtōp/

An **isotope** of a chemical element is an atom that has a different number of neutrons (that is, a greater or lesser atomic mass) than the standard for that element.

DIAGRAM 1 -

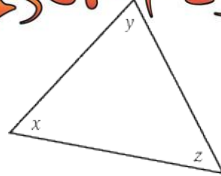


**Diagram 1** (from Major League Baseball, MLB): THE PLAYING FIELD. The infield shall be a 90-foot square. The outfield shall be the area between two foul lines formed by extending two sides of the square, as shown above. The distance from home base to the nearest fence, stand or other obstruction on fair territory shall be 250 feet or more.

Name: \_\_\_\_\_  
School: \_\_\_\_\_



ISOTOPES™



$$x + y + z = 180$$

The sum of the interior angles of the triangle will equal 180°.

the Batter  
Short Stop (SS)  
First Base

Solve the Following...


If, the **batter** hits to the **SS** at an angle of **71°**, the **1<sup>st</sup> baseman** receives the throw from the SS at **47°**.

What is the angle the **Short Stop** throws to the **1<sup>st</sup> baseman** to get the **batter** out?

Work Space...

**Answer:** \_\_\_\_\_

**YouTube** The Science of Hitting a Fastball – *margin of error* [2 ½ mins]  
[www.youtube.com/watch?v=RENLMum5wz4&t=3s](http://www.youtube.com/watch?v=RENLMum5wz4&t=3s)

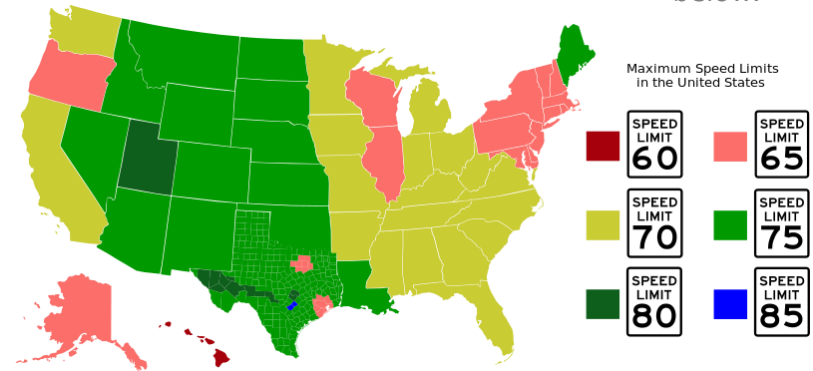
Pitcher 	Pitcher
Look around the stadium and find where they list the pitching speeds in miles/hour (mph)! Fill in the chart below to compare the teams.	



the  
NEW MEXICO  
**MESA** INC.  
of Baseball

Monday, April 16<sup>th</sup>  
Albuquerque Isotopes vs.  
Salt Lake City Bee's

Compare the speed of the pitches to the maximum speed chart for the US shown below.



Use each players *At Bats* (AB) and *Hits* (H) to calculate each Fielder's *Batting Average* (BA)? Fill it in for each player.

$$H/AB = BA$$

	Year	Age	At Bats (AB)	Run Batted In (RBI)	Hits (H)	Home Runs (HR)	Strike Outs (SO)	Batting Average (BA)
Cecil Fielder	1993	29	573	117	153	30	0	
Prince Fielder	2013	29	624	106	174	25	1	

Consider the chart of statistics above, which Fielder... Cecil (the dad) or Prince (the son) would you want on your team?