Practice Run

For each of the following,

- Identify a pattern in the information given.
- Use your pattern to make a conjecture.

1. A relationship between angles in a parallelogram

2. The sum of the digits for multiples of 9

3. The data in the table below

The Top 9 Toronto Blue Jays Players of 2012							
Player	**Position**	**Games Played**	**Runs**	**Hits**	**Home Runs**	**Runs Batted In**	**Batting Average**
Arencibia, J	C	102	45	81	18	56	0.233
Bautista, J	RF	92	64	80	27	65	0.241
Davis, R	LF	142	64	115	8	43	0.257
Encarnacion, E	DH	151	93	152	42	110	0.280
Escobar, Y	SS	145	58	141	9	51	0.253
Johnson, K	2B	142	61	114	16	55	0.225
Lawrie, B	3B	125	73	135	11	48	0.273
Lind, A	1B	93	28	82	11	45	0.255
Rasmus, C	CF	151	75	126	23	75	0.223
Source: *MLB.com*							

Compare your answers.

For each of the following,

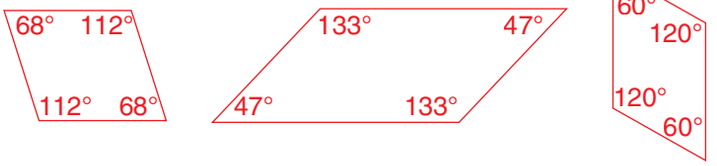
- Identify a pattern in the information given.
- Use your pattern to make a conjecture.

USB Drive

Multimedia

1. A relationship between angles in a parallelogram

A good start may be to draw several different parallelograms and measure their interior angles.



There are several angle patterns you might see within the parallelograms. One pattern is that adjacent angles in the parallelograms add to 180°.

Recall that "adjacent" means "right beside".

Conjecture: The adjacent angles in a parallelogram will always add to 180°.

2. The sum of the digits for multiples of 9

Begin by writing some multiples of 9 and determining the sum of their digits.

Multiples of 9	9	18	27	36	45	54	63
Sum	9	1 + 8 = 9	2 + 7 = 9	3 + 6 = 9	4 + 5 = 9	5 + 4 = 9	6 + 3 = 9

The sums of the digits of all the multiples of 9 shown are 9.

Conjecture: The sum of the digits of a multiple of 9 will be 9.

3. The data in the table below

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There is a lot of information in this table and many patterns are possible. The following table lists some possibilities.

Pattern	Conjecture
No batting average of the top 9 players was above 0.280.	No one on the entire team will have a batting average above 0.280.
J. Bautista played RF in 2012.	J. Bautista will play RF in 2013.
The top 9 players had a total of 165 home runs.	The top 9 players on the Boston Red Sox will have a total of about 165 home runs.