

# Answer Sheet



## MEAN, MEDIAN, AND MODE

The Danbury Dragons played the Springfield Serpents every day this week. Here is a list of the scores of their games.

DAY	DRAGONS	SERPENTS
Sunday	4	1
Monday	2	11
Tuesday	3	2
Wednesday	8	2
Thursday	4	5
Friday	5	0
Saturday	1	7

1. What is the mean of the Dragons' runs?

$$27 / 7 = 3.857$$

2. What is the mode?

4

3. What is the median?

4

4. What is the mean number of runs for both teams (what is the average number of runs either team scored in a game? (Hint: you will need to divide by 14.)

$$55 / 14 = 3.929$$

5. What is the mode of all the scores?

2

6. Which team scored more runs during the week?

Serpents

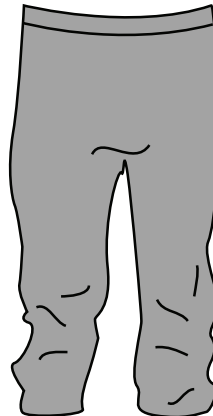


# Answer Sheet



## DRESS FOR SUCCESS

Check out the Coyotes new uniforms!



How many different combinations of hats, jerseys and pants can the Coyotes wear?

12

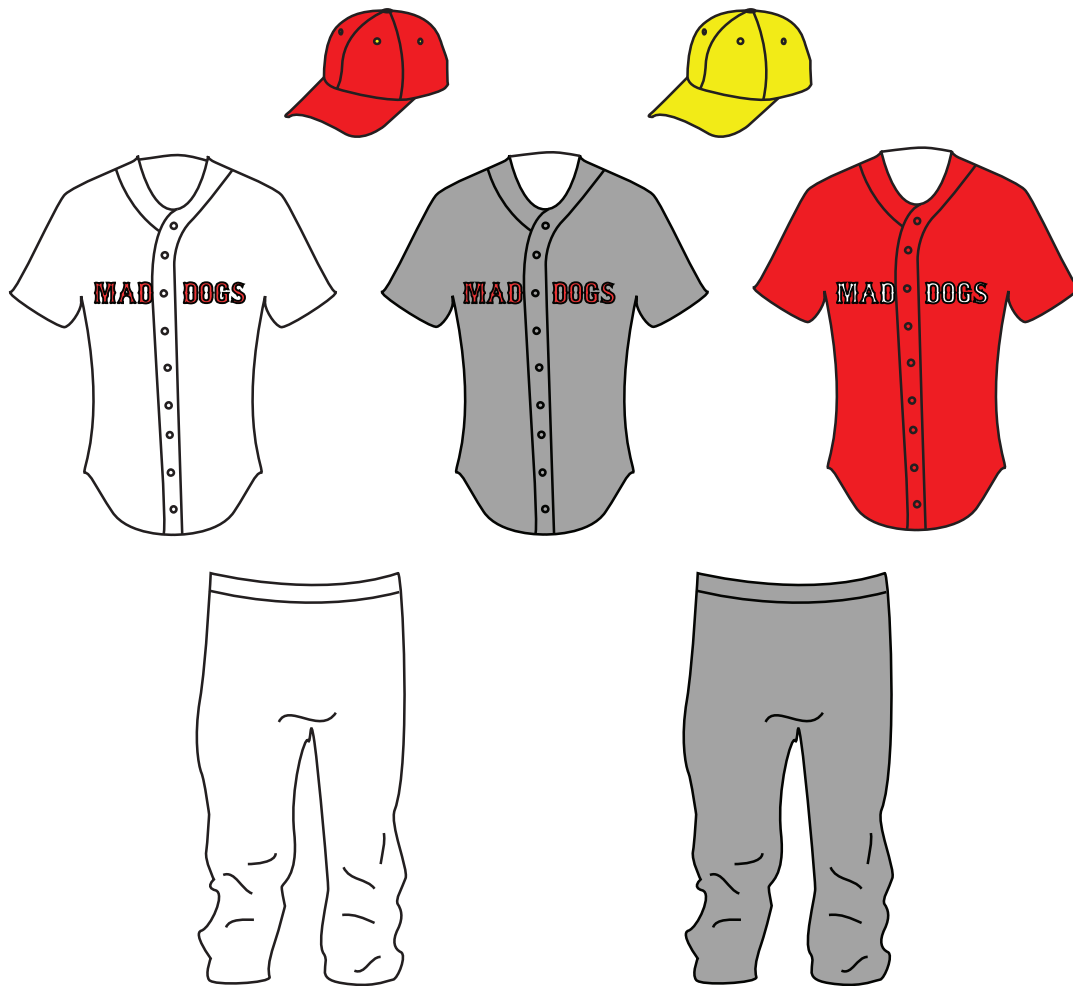


# Answer Sheet



## DRESS FOR SUCCESS

The Mad Dogs also got new uniforms, but they have rules about what to wear. First, they can only wear white jerseys with white pants, and they can only wear gray jerseys with gray pants. Second, they can't wear red jerseys with yellow hats.



How many different combinations of hats, jerseys and pants can the Mad Dogs wear?

6



# Answer Sheet



## ERA: EARNED RUN AVERAGE

ERA stands for “earned run average,” and it shows how many earned runs a pitcher gave up per nine innings pitched.

Here’s the formula:

$$(\text{Earned Runs} \div \text{Innings Pitched}) \times 9$$

### Example:

Example: Roger pitched six innings today. He allowed 3 runs.

$$(3 \div 6) \times 9 = 4.50$$

**Your turn!** Find out the ERA for these pitchers:

1. Myles allowed 2 runs in six innings. **3.00**
2. Reid allowed 5 runs in eight innings. **5.63**
3. Byron allowed 1 runs in seven innings. **1.29**
4. Johnnie allowed 18 runs in 51 innings. **3.18**
5. Leo allowed 28 runs in 62 innings. **4.06**
6. Dave allowed 25 runs in 72 innings. **3.13**
7. Tyler allowed 26 runs in 59 innings. **3.97**
8. Ramon allowed 66 runs in 189 innings. **3.14**



# Answer Sheet



## HOW MANY GAMES BACK?

“Games back” is number that shows how far a team is from first place. To find games back, use this formula:

$$(\text{Difference in wins} + \text{difference in losses}) \div 2$$

Here’s a basic example:

TEAM	WINS	LOSSES
Wildcats	37	24
Knights	34	29
Rebels	33	31

The Wildcats are in first place. They have 3 more wins and 5 fewer losses than the Knights. How many games back are the Knights?

$$(3 + 5) \div 2 = 4 \text{ games back}$$

The Wildcats have 4 more wins and 7 fewer losses than the Rebels. How many games back are the Rebels?

$$(4 + 7) \div 2 = 5.5 \text{ games back}$$



**Complete this table** to find the games back for all teams who aren’t in first place.

TEAM	WINS	LOSSES	GAMES BACK
Racers	38	23	--
Alligators	36	25	2
Owls	30	29	7
Wolves	24	38	14.5
Nomads	22	39	16



# Answer Sheet



## SLUGGING PERCENTAGE

Use the information in the table below to find the slugging percentages for these players from the Medford Miners. See the previous page if you need help!

PLAYER	SINGLES	DOUBLES	TRIPLES	HOME RUNS	AT-BATS	BATTING AVERAGE	SLUGGING %
Casey	2	2	0	0	15	.267	<b>.400</b>
Duane	3	1	1	0	15	.333	<b>.533</b>
Everett	1	0	0	1	12	.250	<b>.417</b>
Brad	3	0	0	1	14	.286	<b>.500</b>
Nolan	3	0	0	0	15	.200	<b>.200</b>
Mark	1	2	0	1	15	.333	<b>.600</b>

Once you've found them, answer the questions below.

1. Duane and Mark both have .333 batting averages. Who has the higher slugging percentage?

**Mark**

2. Who has the highest slugging percentage *without* hitting a home run?

**Duane, .533**

3. There's one player who has a higher batting average but lower slugging percentage than another player. Who is it?

**Casey. His batting average (.267) is higher than Everett's (.250), but his slugging percentage (.400) is lower than Everett's (.417).**



# Answer Sheet



## "THE SPEEDSTER"

**Meet Damon**, also known as "The Speedster." He has plenty of other nicknames: "Flash," "Lightning," "Sweet Feet" and "Wheels." He's the fastest runner in professional baseball!

However, even Damon gets thrown out sometimes when he's trying to steal a base. In baseball, **stolen base percentage** shows how often a player is successful when trying to steal a base.

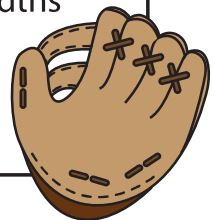
Here's how you find it:

Divide the number of steals by the number of stealing attempts.  
Here's Damon's first season as an example:

$$23 \text{ stolen bases} \div 39 \text{ stealing attempts} = .589744$$

It's expressed the same as batting average, with three digits to the right of the decimal point. Round the number to the thousandths place.

$$.589744 \rightarrow .590$$



**Find Damon's stolen base percentage** and fill out this chart, then answer the questions on the next page.

Season	Steals	Stealing Attempts	SB%
1	23	39	.590
2	34	58	<b>.586</b>
3	31	52	<b>.596</b>
4	25	38	<b>.658</b>
5	22	30	<b>.733</b>
6	24	31	<b>.774</b>
7	21	28	<b>.750</b>



# Answer Sheet



## "THE SPEEDSTER"

1. In which season did Damon steal the most bases?

2

2. In which season did Damon attempt the most steals?

2

3. In which season did Damon record his best stolen base percentage?

6

4. If you were Damon's coach, would you tell him to attempt more or fewer steals each season? Why?

**Fewer. When he attempts fewer stolen bases, he has a higher stolen base percentage.**

5. What trends do you notice about these statistics?

**When he attempts fewer steals, he has a higher stolen base percentage. Also, he generally attempted fewer steals each season (with the exception of season 7).**





# Answer Sheet



## WHAT SHOULD THE MANAGER DO?

**Baseball** is a game of strategy, and managers use numbers to decide their strategy. One group of numbers that they look to is the “splits” or “lefty-righty.” For batters, splits show how well the batter does against right-handed pitchers and left-handed pitchers. Pitchers also have split statistics, showing how well they do against right-handed batters and left-handed batters. Most batters do better against opposite-handed pitchers (for example, a right-handed batter would have a better average against a lefty).

Here’s a table showing a group of batters and their batting averages against right-handed pitchers (RHP) and left-handed pitchers (LHP). The letters next to the players’ names are for right-handed or left-handed.

PLAYER	vs. RHP	vs. LHP
Trent (R)	.223	.314
Pete (L)	.279	.246
Wade (R)	.250	.306

If you were the manager, and you could choose one of these batters to face a right-handed pitcher, who should you choose?

**Pete**



# Answer Sheet



## WHAT SHOULD THE MANAGER DO?

Let's make this tougher! This is the lineup for the Nighthawks, listed in its batting order. You are the manager for the Eagles.

ORDER	PLAYER	vs. RHP	vs. LHP
1	Trent (R)	.223	.314
2	Pete (L)	.279	.246
3	Wade (R)	.250	.306
4	Percy (R)	.276	.299
5	Toby (L)	.300	.283
6	Micah (L)	.257	.262
7	Vicente (R)	.212	.253
8	Eldon (R)	.240	.249

1. Would you choose a righty or a lefty to start the game against the Nighthawks?

**Righty**

2. There is one out in the 7th inning, and you can bring in a new pitcher to face two batters: Toby and Micah. Would you call in the lefty or the righty?

**Lefty**

3. It's crunch time! You are starting the 9th inning with a new pitcher to face three batters: Wade, Percy and Toby. Are you choosing the lefty or the righty?

**Righty**

4. Which Nighthawks player has the biggest difference between his splits? Who has the smallest difference?

**Trent; Micah**



# Answer Sheet



## JUST FOR FUN!

**Directions:** Put the numbers in order from least to greatest, then enter them in order in the table below. Use the code to solve the riddle!

.8   .75   .13   9/10   .25   1/3   3/10   .1   5/9   1/2

B	P	U	D	Y	L	E	L	O	A



Man's best friend is a dog. Pitcher's best friend is a...

D	O	U	B	L	E		P	L	A	Y
3/10	.8	.25	.1	1/2	5/9	---	.13	.75	9/10	1/3

