NAME:

GRADE:

SCHOOL:

BASEBALL MATH

ERA: Earned run average (ERA) is the average of earned runs given up by a pitcher per 9 innings pitched. It is solved by multiplying how many earned runs are allowed by 9 and then dividing by the number of innings pitched.

Example: Over his first four starts of the season for the Red Wings last year, Devin Smeltzer allowed 5 earned runs (ER) over 25 innings pitched (IP). So, (5 x 9)/25 = 1.80 ERA!

Problem: Lewis Thorpe pitched in 20 games for the Red Wings last season. He allowed 91 hits, 51 runs, 49 earned runs and 13 home runs over 96 innings pitched. What was his ERA?

ANSWER:

BATTING AVERAGE: Batting Average is the number of hits a player has divided by the number of at bats. It is usually rounded to three decimal places.

Example: Red Wings catcher Tomas Telis had 101 hits in 306 at bats last season. So, 101/306 = .330

Problem: Outfielder Brent Rooker played in 65 games for the Wings last season. He collected 64 hits in 224 at bats. What was his batting average?

ANSWER:

SLUGGING PERCENTAGE: Slugging Percentage is calculated as total bases divided by at bats. Unlike batting average, slugging percentage gives more weight to extra-base hits with doubles, triples, and home runs, relative to singles. So the formula would look like this: singles + (2 x doubles) + (3 x triples) + (4 x home runs)/at bats = Slugging Percentage

Example: In 41 games with the Wings in 2019 Jaylin Davis collected 24 singles, 11 doubles, 1 triple, 15 home runs in 154 at bats. So, 24 + (2 x 11) + (3 x 1) + (4 x 15)/154 = .708

Problem: Jake Cave played in 48 games for the Wings in 2019. He had 69 hits which included 40 singles, 18 doubles, 4 triples and 7 home runs in 196 at bats. What was his slugging percentage?

ANSWER:

BONUS QUESTIONS:

1. Drew Maggi had 100 hits last season for the Red Wings. He had 19 doubles, 4 triples and 10 home runs. How many singles did he have?

2. If it's 90 feet from home plate to first base and all the base lengths are the same, how many feet does a player have to run after they hit a home run?