MAT 011 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project #2

Individual Component

Due: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**



**Directions:** In this assignment you are going to find and comment on several games and seasons of famous quarterbacks. In the essay part **(Parts e – h)**, please **TYPE** in thoughtful, grammatically correct, and complete sentences. Each question should have an answer that is several sentences long or more! **Credit your sources**. Please **STAPLE** your typed work to this packet.

**“It is a fair way to compare everyone because the standard is the same. But don’t try to explain it to anyone.”** - Seymour Siwoff, President of Elias Sports Bureau

Despite President Siwoff’s warning, we’ve been able to break down the Passer Rating using straightforward calculations. Recall that the Passer Rating is given by the equation below.

**Passer Rating** =  (**I + C + Y + T)**

And here is a summary of the four linear functions we need:

**I** = – 0.25 **i** + 2.375 **C** = 0.05 **c** – 1.5 **Y** = 0.25 **y** – 0.75 **T** = 0.2 **t**

Don’t forget that all four values must be between **zero** (no negative ratings) and **2.375**.

In the last Super Bowl XLI the Chicago Bears played the Indianapolis Colts. The quarterback of the Bears was Rex Grossman and the quarterback of the Colts was Peyton Manning. The Colts beat the Bears with a score of 29 to 17.

# Peyton Manning

 (Indianapolis Colts)

**February 4, 2007**

**completions**

**touchdowns**

**yards**

**interceptions**

**attempts**

**1**

**25**

**247**

**38**

**1**

# Rex Grossman

(Chicago Bears)

**February 4, 2007**

**completions**

**touchdowns**

**yards**

**interceptions**

**attempts**

**2**

**20**

**165**

**28**

**1**

Let’s see if the Passer Rating supports the Colts’ win! (In this example, you only need to follow along. Then it will be your turn.)

*Example*: Indianapolis Colts: Determine the four individual ratings for Peyton Manning

## i =  = 0.0263 = 2.63 percent I =  1.717

#  c =  = 0.6579 = 65.79 percent C =  1.790

**y = =** 6.5(NOT a percent) **Y =  0.875**

**t =  =** 0.0263 = 2.63percent **T =  0.526**

And thus Peyton Manning’s (Indianapolis Colts) overall Passer Rating for Super Bowl XLI is

I + C + Y + T = 1.717 + 1.790 + 0.875 + 0.526 = 4.908

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**Passer Rating** =  = **81.8**

As we did above, start with the calculation of *i*, c, y, and t taking the number of attempts into account. Show *i*, c, t as a fraction, then a decimal, then a percent. You may round your percent to the nearest hundredths.

Note: y is not a percent! Give I, C, Y, T, to the nearest thousandths. The equations are restated above.

1. Chicago Bears: Determine the four individual ratings for Rex Grossman.

## i = \_\_\_\_\_\_\_\_ = \_\_\_\_\_\_ = \_\_\_\_\_\_\_ percent I=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#  c = \_\_\_\_\_\_\_\_ = \_\_\_\_\_\_ = \_\_\_\_\_\_\_ percent C =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**y = \_\_\_\_\_\_\_\_= \_\_\_\_\_\_\_** (NOT a percent) **Y = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**t** = \_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_ = \_\_\_\_\_\_\_ percent **T** = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Determine Rex Grossman’s (Chicago Bears) overall Passer Rating for Super Bowl XLI.

(*Show your calculation.*)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1. Let’s look at a **Perfect Game**. Recall that the greatest value any of the four ratings can take on is 2.375. If a player averages 2.375 for all four components, find the sum **I + C + Y + T** and fill it in below.

|  |  |
| --- | --- |
| Interception Rating, I |   2.375 |
| Completion Rating, **C** |  2.375 |
| Yardage Rating, **Y** |  2.375  |
| Touchdown Rating, **T** |  2.375 |
|  SUM **I + C + Y + T** for a **Perfect Game** |  |

1. And finally, determine the Passer Rating of a **Perfect Game**. (*Round to the nearest* ***tenth.***)

Passer Rating for a **Perfect Game** =

COMPLETE **at least 2** of the following four parts:

1. From the Passer Ratings for Peyton Manning and Rex Grossman on February 4, 2007, are you surprised that the Colts won Super Bowl XLI? **Explain** why or why not.
2. Give at least two points of criticism of the current Passer Rating System used by the NFL to compare quarterback performances. Do you think it is a fair system of rating quarterback **performance**? If you were a quarterback, would you agree with being compared to other quarterbacks this way? Explain.
3. American Football is becoming very popular in Canada and Europe and other foreign countries. There is serious consideration about playing the Super Bowl (the final game of the season) on foreign soil and only televising the event in the US. Please comment.
4. The advertisement slots during the Super Bowl are getting increasingly expensive. Research online how much 30 seconds of advertisement cost during recent Super Bowl games. Then comment on the issue of such advertising, or anything related to the topic. (Just a few ideas: Are these numbers justified? Why do companies spend this much money on advertising during the Super Bowl? Do you agree with the practice? Any critical thoughts?)

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