

The JETS Challenge

Provided by Dave Meredith, Associate Professor,
Penn State University-Fayette

Challenge 32 – The Quarterback Challenge

Problem:

The formula for quarterback rating has 5 steps: (1) completion percentage minus 30, times 0.05 (2) yards per attempt minus 3, times 0.25; (3) touchdown percentage (per attempt), multiplied by 0.2 (4) interception percentage (per attempt), multiplied by 0.25, subtracted from 2.375. (5) Add previous 4 totals, divide by 6 and multiply by 100. Ben Rothlisberger completed 132 passes out of 192 attempts, gaining 1588 yards for the season. He passed for 12 touchdowns and was intercepted 6 times.

Determine his QB rating for the 2005 season.

Solution:

(1) $(\text{Completed \%} - 30) \times .05$

$$= \left(\frac{132}{192} \times 100 - 30 \right) \times .05$$

$$= (68.75 - 30) \times .05 = 1.9375$$

(2) $(\text{Yds. per attempt} - 3) \times .25$

$$= \left(\frac{1588}{192} - 3 \right) \times .25$$

$$= (8.27 - 3) \times .25 = 1.3175$$

$$(3) (TD\%) \times .2$$

$$= \frac{12}{192} \times 100 \times .2 =$$

$$= (6.25) \times .2 = 1.25$$

$$(4) 2.375 - [(Int. \%) \times .25]$$

$$= 2.375 - \left(\frac{6}{192} \right) \times 100 \times .25$$

$$= 2.375 - (3.125) \times .25$$

$$= 2.375 - .78125$$

$$= 1.59375$$

$$(5) \left(\frac{\text{sum of (1) - (4)}}{6} \right)^{100} = \left(\frac{6.09875}{6} \right)^{100}$$

$$= \underline{101.6}$$