Name:_____

Basketball statistics and systems of equations

      Deron Williams and Chris Paul have been compared to each other their entire careers in the NBA. Deron Williams was drafted by the Utah Jazz with the third pick of the 2005 NBA Draft. Chris Paul was drafted one spot later by the New Orleans Hornets. Both players have comparable statistics from their three seasons in the league, both have played in the NBA All-Star team, and both were part of the gold medal winning 2008 United States Olympic Basketball Team.

In basketball, a free throw is worth 1 point and a field goal is ether 2 points or 3 points. In the 2007-2008 season, Chris Paul scored a total of 1684 points. The total number of 2-point and 3-point field goals he made was 630 and the total number of free throws he made was 332. Using a system of equations, determine how many 2-point field goals and 3-point field goals Chris Paul made in the 2006-2007 season.

In the 2007-2008 season, Deron Williams scored a total of 1545 points. The total number of 2-point field goals and free throws he made was 813 and the total number of 3-point field goals he made was 83. Using a system of equations, determine how many 2-point field goals and free throws Deron Williams made in the 2006-2007 season.

In basketball a field goal is defined as a shot that is worth 2 points or 3 points. What was Chris Paul's field goal percentage if he attempted 1291 field goals?

What was Deron Williams' field goal percentage if he attempted 1117 field goals?

What was Chris Paul's 3-point percentage if he attempted 249 3-point field goals?

What was Deron Williams' 3-point percentage if he attempted 210 3-point field goals?

During the 2007-2008 season, Chris Paul played in 80 games. How many field goals did Chris Paul make per game during the 2007-2008 season?

During the 2007-2008 season, Deron Williams played in 82 games. How many field goals did Deron Williams make per game during the 2007-2008 season?

Online Research: What are the current statistics for Chris Paul and other players? Visit espn.go.com to learn more.

Bonus: By using online resources, find Chris Paul's percent increase/decrease from one season to the next.

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Answer key

Deron Williams and Chris Paul have been compared to each other their entire careers in the NBA. Deron Williams was drafted by the Utah Jazz with the third pick of the 2005 NBA Draft. Chris Paul was drafted one spot later by the New Orleans Hornets. Both players have comparable statistics from their three seasons in the league, both have played in the NBA All-Star team, and both were part of the gold medal winning 2008 United States Olympic Basketball Team.

In basketball, a free throw is worth 1 point and a field goal is ether 2 points or 3 points. In the 2007-2008 season, Chris Paul scored a total of 1684 points. The total number of 2 point and 3 point field goals he made was 630 and the total number of free throws he made was 332. Using a system of equations, determine how many 2-point field goals and 3-point field goals Chris Paul made in the 2006-2007 season?

Free throws + 2-point field goals + 3-point field goals = 1684
$$332 + 2x + 3y = 1684$$
$$x + y = 630 \rightarrow y = 630 - x$$

$332 + 2x + 3(630\text{-}x) = 1684$
$332 + 2x + 1890 - 3x = 1684$
$2222 - x = 1684$
$\text{-}x = \text{-}538$
$x = 538$ (the number of 2-point field goals)

$x + y = 630$
$538 + y = 630$
$y = 92$ (the number of 3-point field goals)

In the 2007-2008 season, Deron Williams scored a total of 1545 points. The total number of 2 point field goals and free throws he made was 813 and the total number of 3-point field goals he made was 83. Using a system of equations, determine how many 2-point field goals and free throws did Deron Williams made in the 2006-2007 season?

Free throws + 2-point field goals + 3-point field goals = 1545
$$x + 2y + 83(3) = 1545$$
$$x + 2y + 249 = 1545$$
$$x + y = 813 \rightarrow y = 813 - x$$

$x + 2(813 - x) + 249 = 1545$
$x + 1626 - 2x + 249 = 1545$

-x + 1875 = 1545
-x = -330
x = 330 (the number of free throws)

x + y = 813
330 + y = 813
y = 483 (the number of 2-point field goals)

In basketball a field goal is defined as a shot that is worth 2 points or 3 points. What was Chris Paul's field goal percentage if he attempted 1291 field goals?

$$\frac{630}{1291} = \text{Approximately 49\%}$$

What was Deron Williams' field goal percentage if he attempted 1117 field goals?

$$\frac{566}{1117} = \text{Approximately 51\%}$$

What was Chris Paul's 3-point percentage if he attempted 249 3-point field goals?

$$\frac{92}{249} = \text{Approximately 37\%}$$

What was Deron Williams' 3-point percentage if he attempted 210 3-point field goals?

$$\frac{83}{210} = \text{Approximately 40\%}$$

During the 2007-2008 season, Chris Paul played in 80 games. How many field goals did Chris Paul make per game during the 2007-2008 season?

$$\frac{630}{80} = 7.9 \text{ field goals made per game}$$

During the 2007-2008 season, Deron Williams played in 82 games. How many field goals did Deron Williams make per game during the 2007-2008 season?

$$\frac{566}{82} = 6.9 \text{ field goals made per game}$$

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