For all field goal math problems show your work and your answer on the back on your weekly scoring page.

Week 1 – Order of Operations

When calculating the score for your quarterback each week you are *evaluating an expression*. The expression for quarterbacks is:

$$6t + 0.04p + 0.1r - 4i - 3f$$

t = touchdowns, p = passing yards, r = rushing yards, $\underline{i}$ = interceptions, f = fumbles

Use the above formula to calculate the score for each quarterback below. Do not round like we do in our league.

		TDs	Passing yards	Rushing yards	Interceptions	Fumbles
1.	Peyton Manning	2	310	5	1	1
2.	Brett Favre	3	280	35	2	0
3.	Joe Montana	4	210	20	1	2

Week 2 – Adding and Subtracting Integers

Running back were having a bad day. They were fumbling all over the place and losing yardage on almost every carry. Use the table below to answer the questions about Emmitt Smith.

	Carry Number and Yards								
	1	2	3	4	5	6	7	8	9
Emmitt Smith	−12	−7	3	−4	22	−5	0	−9	−8

1. What is the total yardage that Emmitt Smith ran for in his 9 carries?
2. What is the difference between his longest (best) and shortest (worst) carry?
3. Which categories will all of the above numbers fall into (list all that apply):
    natural numbers, whole numbers, integers, rational numbers, irrational numbers, real numbers

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Week 3 – All Integers

Below are the total scores for coaches during Week 1-16 of the 2016 NFL season.

Pete Carroll	30	Jeff Fischer	−51
John Fox	−39	Chip Kelly	−63
Andy Reid	33	Ron Rivera	−15

1. What is the sum of all 6 coaches' scores?

2. What is the sum of the absolute values of all 6 coaches' scores?

3. If the coaches got the same scores for 5 consecutive season, how many more points would Pete Carroll have than Chip Kelly?

Week 4 – Fractions

When calculating the weekly score for quarterbacks we could have used a fraction system. The expression written with fractions would be:

$$6t + \frac{1}{25}p + \frac{1}{10}r - 4i - 3f$$

Use the above formula to calculate the score for each quarterback below. Record your final answer as a mixed number.

		TDs	Passing yards	Rushing yards	Interceptions	Fumbles
1.	Aaron Rodgers	3	315	10	0	1
2.	Eli Manning	2	230	6	1	1
3.	Tom Brady	2	265	7	2	0

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Week 5 – Fraction Word Problems

Each team plays 16 games in a regular season. If a wild card team makes it to the Super Bowl the team will play 20 games.

1. The Green Bay Packers won three-fourths of their regular season games. In the games that they won, they blow out the opponent half the time. How many games did they not only win, but also blew out the opponent?

2. The Dallas Cowboys kept track of their statistics over 5 regular seasons. They found that they had a running back reach 50 yards in four-fifths of all the games. Of the 50 yards games, three-eighths of the time a running back reached 100 yards. How many 50 yard games and how many 100 games did they have?

3. The Pittsburgh Steelers held their opponents to less than 20 points in three-fifths of the games they played. If the held opponents to less than 20 points 14 times, how many total games did they play?

Week 6 – One and Two Step Equations

1. In the Eubanks Fantasy Football League coaches are scored based on the following expression where w represents the amount of points their team wins by:

$$0.6w + 2.7$$

   If Jason Garrett, the Dallas Cowboy coach, scores 10.5 points one week, how many points did the Cowboys win by? Write an equation and solve.

2. In the Carroll Fantasy Football League coaches are scored based on the following expression where w represents the amount of points their team wins by:

$$\frac{5}{9}w + \frac{10}{3}$$

   If Jason Garrett, the Dallas Cowboy coach, scores $-\frac{10}{3}$ points one week, how many points did the Cowboys lose by? Write an equation and solve.

3. Using the same scoring in question 2, how much did the Cowboys win by if Jason Garrett's score is $7\frac{7}{9}$? Write an equation and solve.

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Week 7 – Equation Word Problems

1.-3.   Write three word problems using your data and statistics from this week that can be solved by your math teacher by writing a two-step (or more) equations.

Week 8 – Variables of Both Sides

Gabrielle, Donnelly, and Houston all wanted to come up with their own scoring systems for fantasy football coaches. They came up with the following:

	Gabrielle	**Donnelly**	**Houston**
Coach's expression	$0.3w + 2.5$	$0.5w + 0.5$	$0.4w + 2$
w represents how many points their team wins by			

1. How many points must a coach win by to score the same amount in Gabrielle and Donnelly's scoring systems? How many points is that?

2. How many points must a coach win by to score the same amount in Houston and Donnelly's scoring systems? How many points is that?

3. How many points must a coach win by to score the same amount in Gabrielle and Houston's scoring systems? How many points is that?

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Week 9 - Inequalities

The following formula is used each week to determine the point for the defense based on points allowed:

$$p = 12 - 0.5x$$

1. How many points, *x*, can the Packers allow so that their score, *p*, is greater than or equal to 8? Write an inequality and solve.

2. How many points, *x*, can the Cowboys allow so that their score, *p*, is less than or equal to 4? Write an inequality and solve.

3. How many points, *x*, can the Patriots allow so that their score, *p*, is greater than or equal to 0? Write an inequality and solve.

Week 10 – Rates and Proportions

1. Aaron Rodgers scored a total of 41 points in the first two games of the 2016 season. At that rate how many points would he score in a complete 16 game season? Write a proportion and solve.

2. Russell Wilson scored *x* points in 12 games that he played. Drew Brees scored $(x + 72)$ points in 16 games that he played. If Wilson and Brees had the same score per game (same unit rate), how many total points did each player score? Write a proportion and solve.

3. Andrew Luck averaged $21\frac{1}{3}$ points per game in the first six games of the 2016 season. If he continues this rate how many points would he be expected to score in the rest of the 16 game season?

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Week 12 – Rate of Change & Slope

The following formula is used to determine the points, *p*, a player would score from touchdowns, *t*, in a game.

$$p = 6t$$

1. What is the rate of change or slope in this situation?

2. Hand draw a coordinate plane and graph this situation from 0 to 5 touchdowns.

3. Is this an example of direct variation? If so, what is *k*?

Week 13 - Percentages

1. David Johnson scored at least 20 points in 75% of his 16 games in 2016. In the games when he scored at least 20 points, he scored at least 30 points 50% of the time. How many games did David Johnson score at least 30 points?

2. About 27% of Mr. Mangham's student teams drafted Cam Newton last year. If 22 teams drafted Cam Newton, how many total teams were there?

3. Ryan Mathews was selected by 10 students teams and 22 total teams in 2016. What percentage of the teams that owed Ryan Mathews are student teams?