

Fourth Quarter Fractions

Football is full of equal parts: four quarters in every game and ten big sections across the field. Use fractions to read the clock, the field and the stat sheet. Every player and team on this sheet is made up.

Name _____

Date _____

FRACTION TOOLKIT

Numerator

the top number: the parts you count

Denominator

the bottom number: equal parts in all

Quarters

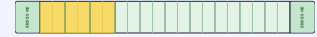
4 quarters in a game, so each is $\frac{1}{4}$

Tenths

The big yard lines split the 100 yards between the goal lines into 10 equal parts, so each part is $\frac{1}{10}$ of the field

Equivalent

$\frac{2}{4}$ and $\frac{1}{2}$ are the same amount



$\frac{3}{10}$ of the field

COUNT THE EQUAL PARTS

ROOKIE

- 1 A football game has **4 quarters**. The Otters and the Moose have finished **3 quarters**. What fraction of the game has been played?

WORK SPACE

Grid for working space.

ROOKIE

- 2 The big yard lines split the 100 yards between the goal lines into **10** equal parts. On one play, the ball moved across **3** of those parts. What fraction of the field is that?

WORK SPACE

Grid for working space.

STARTER

- 3 Quarterback Lena threw **8** passes. Her receivers caught **5** of them. What fraction of her passes were **not** caught?

WORK SPACE

Grid for working space.

STARTER

- 4 On their first drives, the Herons moved the ball $\frac{4}{10}$ of the field and the Pumas moved it $\frac{7}{10}$ of the field. How much farther did the Pumas go?

WORK SPACE

Grid for working space.

PRO

- 5 A coach splits the practice field into **8** equal strips. The linemen use **4** of them. What fraction of the field do they use? Write it in **simplest form**.

WORK SPACE

Grid for working space.

PRO

- 6 In pro and college football, each quarter lasts **15 minutes**. How many minutes are in $\frac{2}{3}$ of one quarter?

WORK SPACE

Grid for working space.

_____ minutes

ALL-STAR

- 7 The Otters have **24** players. $\frac{3}{8}$ of them play only on defense. How many players is that?

WORK SPACE

Grid for working space.

_____ players

CHALLENGE ★

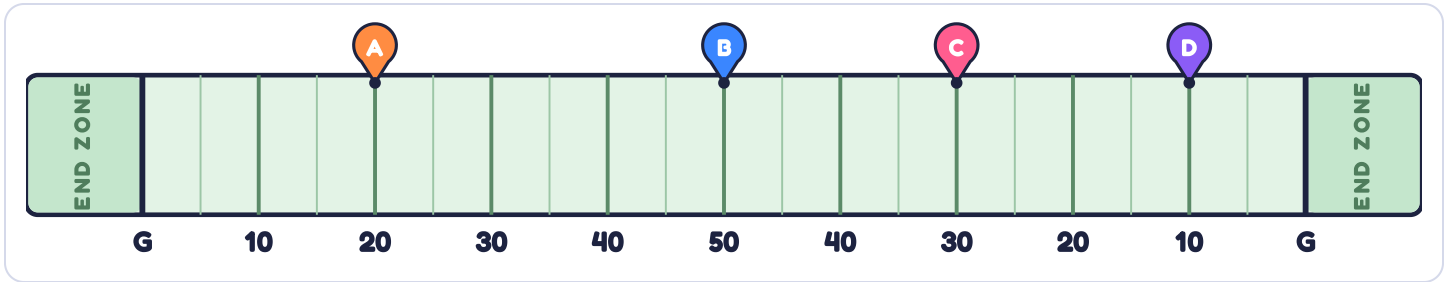
- 8 Kicker Dev made **7 of 10** field goals. Kicker Rosa made **4 of 5**. Who made the greater fraction of kicks? *Hint: write Rosa's fraction in tenths.*

WORK SPACE

Grid for working space.

A Fraction Field

Yard numbers count up to 50 at midfield, then back down. Start at the **left** goal line (G) and count the yards to each marker. Then write the distance as a fraction of the 100 yards between the goal lines.



MARKER	YARD LINE ON THE FIELD	YARDS FROM THE LEFT GOAL LINE	FRACTION OF THE FIELD
A	Left 20 yard line	yards	
B	50 yard line (midfield)	yards	
C	Right 30 yard line	yards	
D	Right 10 yard line	yards	

5 What fraction of the field is between marker A and marker D?

B Fraction Bars

Four made-up quarterbacks threw passes at practice. Each bar is one quarterback's passes. Shade one part for each completed pass, then write the fraction.

1 Shade each bar. Write the fraction in the boxes.

Ava completed 3 of 4		
Ben completed 6 of 8		
Cole completed 2 of 3		
Drew completed 5 of 6		

- 2 Which **two** quarterbacks completed the same fraction of their passes? _____
- 3 Who completed the **greatest** fraction of passes? _____
- 4 Who completed the **smallest** fraction of passes? _____

C Game Day Story Problems

Read each problem carefully. Draw a bar or a field if it helps.

- 1 Practice lasts **60 minutes**. The team spends $\frac{1}{4}$ of practice stretching and $\frac{1}{2}$ running plays. The rest is a scrimmage. How many minutes is the scrimmage? _____ minutes
- 2 Kicker Mo tried **12** extra points and made $\frac{3}{4}$ of them. How many did he **miss**? _____ kicks
- 3 Running back Theo gained $\frac{1}{10}$ of the field on one run and $\frac{3}{10}$ on the next. How many **yards** did he gain in all? _____ yards

THINK DEEPER 4. Write a fraction that is equal to $\frac{1}{2}$ and has a denominator of **10**.

WORK SPACE

✓ **Answer Key** (for teachers & parents)

Answers for **Fourth Quarter Fractions**. Accept any equivalent fraction (for example $1/5$ for $2/10$) unless the question asks for simplest form. Shading in Part B can start from either end of the bar.

Page 1 Problems

- Answer: $3/4$**
3 of the 4 equal parts of the game are done.
- Answer: $3/10$**
3 of the 10 equal parts. That is 30 of the 100 yards.
- Answer: $3/8$**
8 passes, 5 caught, so 3 were not caught.
- Answer: $3/10$**
Same denominator, so subtract the tops: 7 tenths take away 4 tenths.
- Answer: $1/2$**
4 of 8 strips is $4/8$. Half of the strips is $1/2$.
- Answer: 10 minutes**
 $15 \div 3 = 5$ minutes in each third, and 2 thirds is 10.
- Answer: 9 players**
 $24 \div 8 = 3$ players in each eighth, and 3 eighths is 9.
- Answer: Rosa**
 $4/5$ is the same as $8/10$, and 8 tenths is more than Dev's 7 tenths.

Quick score

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A · Fraction Field	_____ / 5
B · Fraction Bars	_____ / 4
C · Story Problems	_____ / 4
Total	_____ / 21

Skills practiced

- Fractions of a whole
- Fractions of a set
- Tenths
- Equivalent fractions
- Comparing fractions
- Adding & subtracting fractions
- Fraction of a number
- Simplest form

Teaching tip: Tape a paper strip along a desk and mark 10 equal parts as a mini field. Have students slide a paper football and say the fraction out loud ("3 tenths of the field") before writing it.

A · Fraction Field

- Answer: A: 20 yards, $2/10$**
The left 20 is 20 yards from the left goal line.
- Answer: B: 50 yards, $5/10$**
Midfield is halfway: $5/10$ is the same as $1/2$.
- Answer: C: 70 yards, $7/10$**
The right 30 is 30 yards from the right goal line, so $100 - 30 = 70$.
- Answer: D: 90 yards, $9/10$**
The right 10 is $100 - 10 = 90$ yards from the left goal line.
- Answer: $7/10$**
 $9/10 - 2/10 = 7/10$, which is 70 yards.

B · Fraction Bars

- Answer: Ava $3/4$, Ben $6/8$, Cole $2/3$, Drew $5/6$**
Bars shaded 3, 6, 2 and 5 parts.
- Answer: Ava and Ben**
 $6/8$ is the same as $3/4$. The shaded parts line up.
- Answer: Drew**
Only 1 part of 6 is left unshaded, the smallest gap.
- Answer: Cole**
1 part of 3 is left unshaded, the biggest gap.

C · Story Problems

- Answer: 15 minutes**
Stretching takes 15 and plays take 30. $60 - 45 = 15$.
- Answer: 3 kicks**
He made 9 of the 12 kicks, so $12 - 9 = 3$.
- Answer: 40 yards**
 $1/10 + 3/10 = 4/10$ of 100 yards.
- Answer: $5/10$**
Half of 10 is 5.