

Grade 7 · Unit Rates with Fractions · Test

Common Core 7.RP.A.1 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

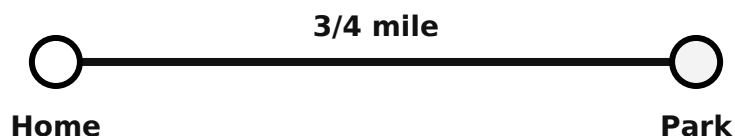
This test has 10 questions worth 20 points. Give each unit rate with its units and simplify fractions. Work on separate paper, show every step, and do not use a calculator unless your teacher allows it. The test takes about 45 minutes.

Test information

- **Grade:** Grade 7
- **Chapter:** Unit Rates with Fractions
- **Common Core:** 7.RP.A.1
- **Time:** 45 minutes
- **Total:** 20 points (Question 1: 2 pts; Question 2: 2 pts; Question 3: 2 pts; Question 4: 2 pts; Question 5: 2 pts; Question 6: 2 pts; Question 7: 2 pts; Question 8: 2 pts; Question 9: 2 pts; Question 10: 2 pts)

Question 1: Bike trip (2 points)

Jamal bikes $\frac{3}{4}$ mile in $\frac{1}{8}$ hour. Find his unit rate in miles per hour.



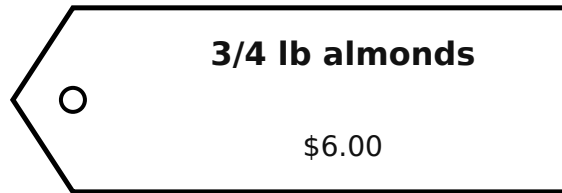
Jamal rides this trip in $\frac{1}{8}$ hour.

Question 2: Water flow (2 points)

A faucet fills $\frac{5}{6}$ gallon in $\frac{1}{3}$ minute. Find the unit rate in gallons per minute.

Question 3: Almond price (2 points)

A bag with $\frac{3}{4}$ pound of almonds costs \$6.00. Find the price per pound.



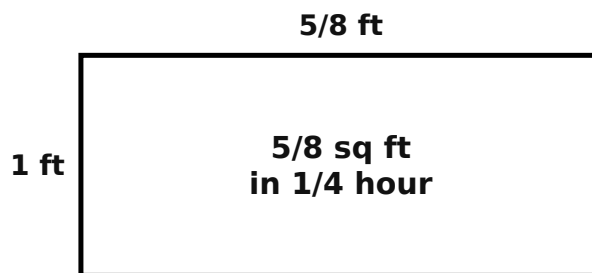
Price of the bag.

Question 4: Minutes and hours (2 points)

Aisha walks $\frac{3}{4}$ mile in 15 minutes. Find her speed in miles per hour.

Question 5: Poster paint (2 points)

Mei paints $\frac{5}{8}$ square foot of a poster in $\frac{1}{4}$ hour. Find the area she paints per hour.



The area Mei paints.

Question 6: Cyclist comparison (2 points)

Cyclist A rides $\frac{2}{3}$ mile in $\frac{1}{6}$ hour. Cyclist B rides $\frac{3}{4}$ mile in $\frac{1}{5}$ hour. Which cyclist is faster, and by how many miles per hour?

Question 7: Find the error (2 points)

Liam says that a runner who goes $\frac{1}{3}$ mile in $\frac{1}{6}$ hour has a unit rate of $\frac{1}{18}$ mile per hour. Find the correct unit rate and explain Liam's mistake.

Question 8: Muffin recipe (2 points)

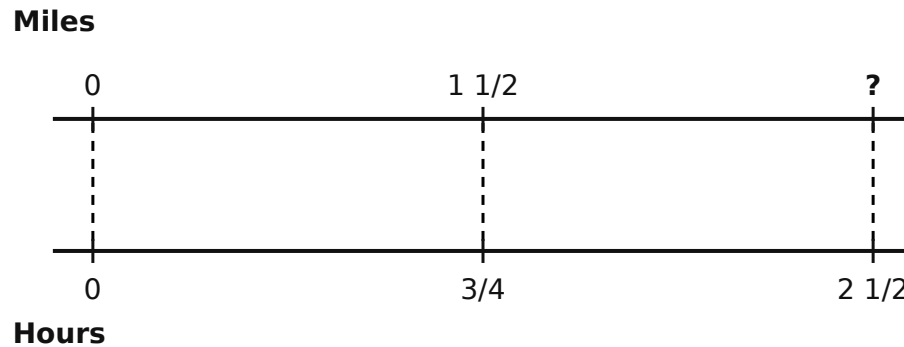
A recipe uses $\frac{3}{4}$ cup of oil for $\frac{1}{2}$ batch of muffins.

- Find the cups of oil per batch. (1 point)
- Find the cups of oil needed for 3 batches. (1 point)

Question 9: Hiking (2 points)

A hiker walks $1\frac{1}{2}$ miles in $\frac{3}{4}$ hour at a steady pace.

- Find the hiker's speed in miles per hour. (1 point)
- How far does the hiker walk in $2\frac{1}{2}$ hours? (1 point)



The hiker's pace.

Question 10: Filling a tank (2 points)

A pipe fills $\frac{1}{2}$ of a tank in $\frac{3}{4}$ minute.

- Find the fraction of the tank filled per minute. (1 point)
- How many minutes does it take to fill the whole tank? (1 point)