

Grade 4 Mathematics Assessment Analysis – SOL Alignment and Cognitive Demand

STANDARD 4.5

The student will

- a) determine common multiples and factors, including least common multiple and greatest common factor;
 - b) add and subtract fractions having like and unlike denominators that are limited to 2, 3, 4, 5, 6, 8, 10, and 12, and simplify the resulting fractions, using common multiples and factors;
 - c) add and subtract with decimals; and
 - d) **solve single-step and multistep practical problems involving addition and subtraction with fractions and with decimals.**
-

1. Jacob, Kevin, and Susan shared a pan of brownies.

- Jacob ate $\frac{1}{3}$ of the pan of brownies.
- Kevin ate $\frac{1}{4}$ of the pan of brownies.
- Susan ate $\frac{1}{6}$ of the pan of brownies.

What fraction of the pan of brownies was left?

2. Jonathan lives $\frac{7}{8}$ of a mile from school. This morning he has walked $\frac{1}{4}$ of a mile. How far is he from school?

- a. $\frac{1}{4}$ mi b. $\frac{1}{8}$ mi c. 1 mi d. $\frac{5}{8}$ mi

3. Kelly made a pot of chili. The recipe called for $\frac{1}{4}$ cup of green peppers and $\frac{1}{3}$ cup of red peppers. What is the total amount of peppers in the chili?

4. Choose the best answer for $\frac{1}{3} + \frac{1}{2} = \underline{\hspace{2cm}}$

- a. $\frac{2}{5}$ b. $\frac{1}{6}$ c. $\frac{2}{6}$ d. $\frac{5}{6}$

5. Mrs. Ford bought $\frac{1}{4}$ of a yard of red ribbon and $\frac{6}{8}$ of yard of green ribbon. How much more green ribbon than red ribbon did Mrs. Ford buy?

6. Kim and Jose shared one whole pizza. Kim ate $\frac{4}{6}$ of the pizza. Jose ate $\frac{3}{12}$ of the pizza. How much of the pizza was eaten?

7. What is the sum of $\frac{1}{4}$ and $\frac{5}{6}$?

- a. $\frac{6}{10}$ b. $1\frac{1}{4}$ c. $1\frac{1}{12}$ d. $\frac{1}{2}$

8. Brandon, Matt and Luis painted a mural on the wall in the school hallway. Brandon painted $\frac{1}{4}$ of the mural. Identify each situation that could describe the amount of the mural that Luis and Matt painted.

- a. Luis painted $\frac{1}{2}$ and Matt painted $\frac{1}{4}$
b. Luis painted $\frac{2}{8}$ and Matt painted $\frac{2}{4}$
c. Luis painted $\frac{1}{3}$ and Matt painted $\frac{6}{12}$