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## LESSON

## Fraction Operations

## 2 Problem Solving: Adding and Subtracting with Unlike Denominators

## Use the circle graph to answer the questions. Write each answer in simplest form.

1. On which two continents do most people live? How much of the total population do they make up together?
2. How much of the world's population live in either North America or South America?
$\qquad$
3. How much more of the world's total population lives in Asia than in Africa?

Circle the letter of the correct answer.
4. How much of Earth's total population do people in Asia and Africa make up all together?
A $\frac{3}{10}$ of the population
B $\frac{2}{5}$ of the population
C $\frac{7}{10}$ of the population
D $\frac{7}{5}$ of the population
6. How much more of the population lives in Europe than in North America?
A $\frac{1}{25}$ of the population
B $\frac{1}{5}$ of the population
C $\frac{1}{15}$ of the population
D $\frac{1}{10}$ of the population

World Population, 2001

5. What is the difference between North America's part of the total population and Africa's part?
F Africa has $\frac{1}{50}$ more.
G Africa has $\frac{1}{50}$ less.
H Africa has $\frac{9}{50}$ more.
J Africa has $\frac{9}{50}$ less.
7. How much of the world's population lives in North America and Europe?
F $\frac{1}{25}$ of the population
G $\frac{1}{15}$ of the population
H $\frac{1}{5}$ of the population
J $\frac{1}{20}$ of the population
5. $\frac{11}{12}$
6. $\frac{7}{8}$
6. $\mathrm{L} ; \frac{3}{4}-\frac{3}{12}=\frac{9}{12}-\frac{3}{12}=\frac{6}{12}=\frac{1}{2}$
7. $\frac{1}{2}$
8. $\frac{1}{12}$
L C D

## Challenge

1. $\frac{2}{3}$
2. $\frac{4}{5}$
3. $\frac{5}{6}$
4. $\frac{3}{8}$
5. $\frac{9}{10}$

## Problem Solving

1. Asia and Europe; $\frac{18}{25}$ of the population
2. $\frac{7}{50}$ of the population
3. $\frac{1}{2}$ of the population
4. C
5. F
6. A
7. H

## Reading Strategies

1. Fractions that have different denominators.
2. Find a common denominator.
3. Multiply the denominators.
4. three
5. two
6. $\frac{5}{6}$
7. $\frac{1}{6}$

## Puzzles, Twisters \& Teasers

1. $\mathrm{E} ; \frac{1}{3}+\frac{1}{7}=\frac{7}{21}+\frac{3}{21}=\frac{10}{21}$
2. C; $\frac{1}{4}+\frac{1}{9}=\frac{9}{36}+\frac{4}{36}=\frac{13}{36}$
3. D; $\frac{4}{5}-\frac{1}{3}=\frac{12}{15}-\frac{5}{15}=\frac{7}{15}$
4. S; $\frac{3}{4}-\frac{3}{10}=\frac{15}{20}-\frac{6}{20}=\frac{9}{20}$
5. $\mathrm{T} ; \frac{7}{12}+\frac{3}{8}=\frac{14}{24}+\frac{9}{24}=\frac{23}{24}$

## Answers for Lesson 3

## Practice A

1. $\frac{5}{4}$
2. $7 \frac{17}{12}$
3. $3 \frac{14}{9}$
4. $1 \frac{4}{3}$
5. $6 \frac{10}{9}$
6. $9 \frac{10}{7}$
7. $1 \frac{1}{3}$
8. $\frac{3}{4}$
9. $1 \frac{3}{4}$
10. $\frac{1}{2}$
11. $\frac{7}{9}$
12. $\frac{3}{8}$
13. $3 \frac{1}{2}$
14. $1 \frac{9}{16}$
15. $\frac{8}{15}$
16. $\frac{1}{2}$ of a pie
17. $\frac{5}{6}$ of an inch

## Practice B

1. $1 \frac{5}{8}$
2. $2 \frac{1}{2}$
3. $5 \frac{7}{9}$
4. $13 \frac{17}{21}$
5. $3 \frac{5}{8}$
6. $4 \frac{1}{2}$
7. $\frac{7}{18}$
8. $7 \frac{13}{16}$
9. $2 \frac{19}{20}$
10. $\frac{5}{6}$
11. $1 \frac{1}{4}$
12. $2 \frac{1}{12}$
13. $1 \frac{1}{2}$
14. $\frac{2}{3}$
15. $2 \frac{3}{4}$
