



## Homework 11-3

### Adding Fractions with Like Denominators

#### Another Look!

Find the sum of  $\frac{3}{8} + \frac{1}{8}$ .

When you add fractions with like denominators, add the numerators and keep the denominator the same.



$$\frac{3}{8} + \frac{1}{8} = \frac{4}{8}$$

Then write the fraction in simplest form.

$$\frac{4 \div 4}{8 \div 4} = \frac{1}{2}$$

Remember, a fraction is in simplest form when the numerator and denominator have no common factor other than 1.

In 1 through 18, find each sum. Simplify, if possible. You may use models and properties of operations to help.

1.  $\frac{1}{3} + \frac{1}{3}$

2.  $\frac{3}{10} + \frac{6}{10}$

3.  $\frac{5}{12} + \frac{2}{12}$

4.  $\frac{3}{12} + \frac{7}{12}$

5.  $\frac{5}{10} + \frac{3}{10}$

6.  $\frac{2}{8} + \frac{4}{8}$

7.  $\frac{7}{10} + \frac{3}{10}$

8.  $\frac{1}{8} + \frac{6}{8}$

9.  $\frac{1}{10} + \frac{5}{10}$

10.  $\frac{4}{5} + \frac{1}{5}$

11.  $\left(\frac{2}{9} + \frac{6}{9}\right) + \frac{1}{9}$

12.  $\frac{6}{10} + 0$

13.  $\frac{1}{5} + \frac{2}{5} + \frac{2}{5}$

14.  $\frac{2}{8} + \frac{1}{8} + \frac{4}{8}$

15.  $\frac{2}{6} + \frac{1}{6}$

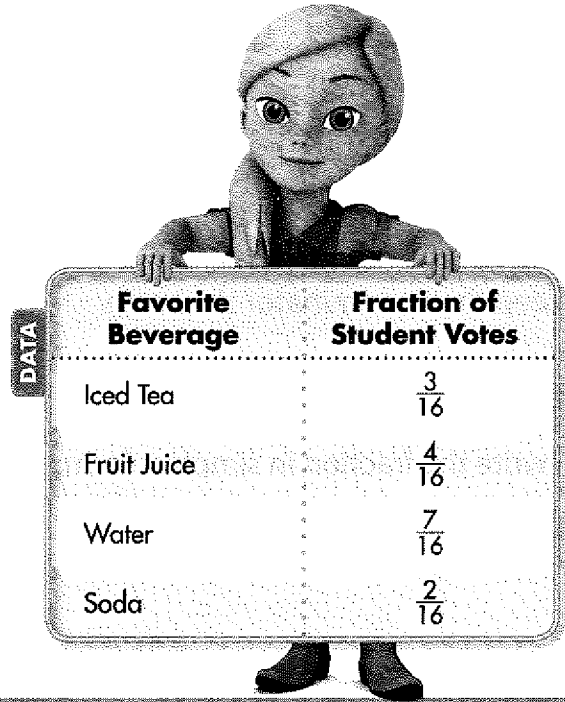
16.  $\left(\frac{20}{100} + \frac{25}{100}\right) + \frac{25}{100}$

17.  $\frac{2}{10} + \left(\frac{6}{10} + \frac{1}{10}\right)$

18.  $\frac{20}{20} + \frac{20}{20} + \frac{20}{20}$

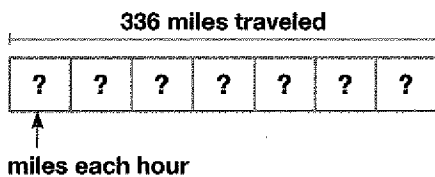
In 19 through 21, use the table at the right.

19. Reason What fraction of the students voted for fruit juice or soda?
20. Number Sense Which two beverages have a sum of  $\frac{5}{8}$  of the student votes?
21. Number Sense What combination of beverages makes up  $\frac{3}{4}$  of the student votes?



Favorite Beverage	Fraction of Student Votes
Iced Tea	$\frac{3}{16}$
Fruit Juice	$\frac{4}{16}$
Water	$\frac{7}{16}$
Soda	$\frac{2}{16}$

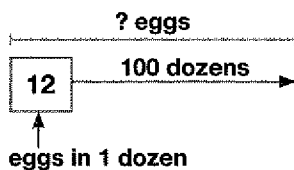
22. Use a Strip Diagram A bus traveled 336 miles in 7 hours. It traveled the same number of miles each hour. How many miles did the bus travel each hour?



23. Number Sense James ate 7 out of the 9 apples that he picked. Which numerical expression could represent the fraction of the apples he ate?

- A  $\frac{3}{4} + \frac{4}{5}$   
 B  $\frac{1}{9} + 6$   
 C  $\frac{2}{9} + \frac{5}{9}$   
 D  $\frac{2}{3} + \frac{2}{3} + \frac{4}{3}$

24. Extend Your Thinking A farmer collected 100 dozen eggs from his hens. How many eggs did the farmer collect?



25. Extend Your Thinking How can you add the fractions  $\frac{3}{10}$  and  $\frac{2}{5}$ ? Explain.

Think about how you can rewrite fractions so they have like denominators.

