

Name _____

Bits and Pieces II - UNIT STUDY GUIDE Key

Hour _____

A local newspaper, Greenville Daily News, sells advertising space. It charges advertisers according to the fraction of a page their ad will fill.



1a. Flo's restaurant owner purchased ads to be put in the paper over several days. She bought three $\frac{1}{4}$ -page ads, four $\frac{1}{8}$ -page ads, and ten $\frac{1}{16}$ -page ads. What is the total amount of ad space that the owner buys?

Write number sentences to support your answers.

$$\frac{1}{4} \times 3 = \frac{3}{4} \rightarrow \frac{12}{16}$$

$$\frac{1}{8} \times 4 = \frac{4}{8} \rightarrow \frac{8}{16}$$

$$\frac{1}{16} \times 10 = \frac{10}{16}$$

$$\frac{12}{16} + \frac{8}{16} + \frac{10}{16} = \frac{30}{16} = 1\frac{14}{16}$$

of $\frac{1}{16}, \frac{1}{8}, \frac{1}{4} \rightarrow$ 1pt
Common Denominators - 1pt

Add

1pt

1b. Meijer purchased $2\frac{3}{4}$ pages of ads. When one of the items in the ad was discontinued, Meijers cancelled $1\frac{5}{8}$ pages of ads. How much advertising space is Meijer actually using? Write number sentences to support your answers.

$$2\frac{3}{4} - 1\frac{5}{8}$$

$$2\frac{6}{8} - 1\frac{5}{8} = 1\frac{1}{8}$$

Subtract 1pt
Common D 1pt
Solution 1pt
3pt

7pt

1pt each x, ÷ fractions (10pts)
 2. Lily's father owns $3\frac{1}{4}$ acres of land/lawn. Lily helped her dad mow and finished mowing $\frac{1}{3}$ of the land on Monday after school.

a. How much of the lawn did Lily mow on Monday?

2pts $3\frac{1}{4} \div \frac{1}{3} \rightarrow \frac{13}{4} \div 3 \rightarrow \frac{13}{4} \times \frac{1}{3} = \frac{13}{12} = 1\frac{1}{12}$

b. How much of the lawn still needed to be mowed?

2pts $3\frac{1}{4} - 1\frac{1}{12}$
 $3\frac{3}{12} - 1\frac{1}{12} = 2\frac{2}{12}$

c. On Tuesday, Lily mowed $\frac{1}{2}$ of the lawn still needing to be mowed. How much of the lawn did she mow on Tuesday?

1pt $\frac{1}{2} \times 2\frac{2}{12} = \frac{1}{2} \times \frac{26}{12} = \frac{26}{24} = 1\frac{2}{24}$

d. Did Lily mow more on Monday or on Tuesday? Explain your reasoning.

1pt $1\frac{1}{12}$ $1\frac{2}{24}$
 they are =

3. Lily's father also owns Biggy Coffee. Biggy Coffee's most popular coffee drink is a latte (LAH tay). It takes $\frac{1}{3}$ cup of milk to make each latte. If they have $2\frac{5}{6}$ cups of milk, how many lattes can they make?

2pts $2\frac{5}{6} \div \frac{1}{3} = 2\frac{5}{6} \times \frac{3}{1} = \frac{17}{6} \times \frac{3}{1}$
 $= \frac{51}{6} = 8\frac{3}{6}$
 8 lattes & extra $\frac{1}{2}$

4. How many bows can you make from $4\frac{3}{4}$ meters of ribbon if a bow takes $\frac{1}{3}$ meter of ribbon?

2pts $4\frac{3}{4} \div \frac{1}{3} = 4\frac{3}{4} \times \frac{3}{1} = \frac{19}{4} \times \frac{3}{1} = \frac{57}{4} = 14$

5) $8 \div \frac{3}{4} = N$, find the value of N

$$\frac{8}{1} \times \frac{4}{3} = \frac{32}{3}$$

Fraction Operat
10pts
(2pts each)

6) $N + \frac{4}{5} = \frac{17}{20}$, find the value of N

$$\frac{17}{20} - \frac{4 \times 4}{5 \times 4} \rightarrow \frac{17}{20} - \frac{16}{20} = \frac{1}{20}$$

7) $N - \frac{3}{4} = \frac{9}{20}$, find the value of N

$$\frac{3 \times 5}{4 \times 5} + \frac{9}{20} \rightarrow \frac{15}{20} + \frac{9}{20} = \frac{24}{20} = \frac{14}{20}$$

8) $\frac{2}{5} \times N = 15$, find the value of N

$$15 \div \frac{2}{5} \rightarrow 15 \times \frac{5}{2} = \frac{75}{2} = 32\frac{1}{2}$$

9) Find the quotient of $1\frac{1}{3}$ and $\frac{5}{9}$.

$$1\frac{1}{3} \times \frac{9}{5} = \frac{4}{3} \times \frac{9}{5} = \frac{36}{5}$$

10) Find the sum of $1\frac{1}{3}$ and $\frac{5}{9}$.

$$1\frac{1 \times 3}{3 \times 3} + \frac{5}{9} \rightarrow 1\frac{3}{9} + \frac{5}{9} = 1\frac{8}{9}$$

11) Find the difference of $1\frac{1}{3}$ and $\frac{5}{9}$.

$$1\frac{1}{3} - \frac{5}{9} \rightarrow 1\frac{3}{9} - \frac{5}{9} \rightarrow \frac{12}{9} - \frac{5}{9} = \frac{7}{9}$$

12) Find the product of $1\frac{1}{3}$ and $\frac{5}{9}$.

$$1\frac{1}{3} \times \frac{5}{9} \rightarrow \frac{4}{3} \times \frac{5}{9} = \frac{20}{27}$$

