3rd Benchmark Study Guide
Conversions & Fractions

Key

1. Show another way to write this expression $\frac{10}{13}$
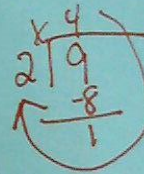
$$10 \div 13$$

2. Show another way to write this expression $2 \div 5$

$$\frac{2}{5}$$

3. Ben has 9 cookies in a box. He divides them equally among his two friends. How many cookies does each friend receive?
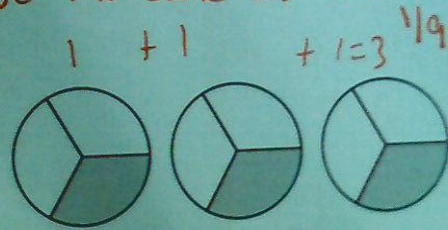
$$\frac{9}{2} = 4\frac{1}{2}$$

4. Tell what will happen to the product without solving.

$$\frac{1}{9} \times \boxed{\frac{4}{4}} = 1$$

The product will be the same as the fraction

5. Write an equation that is modeled by this figure. Then TELL what the product will be.
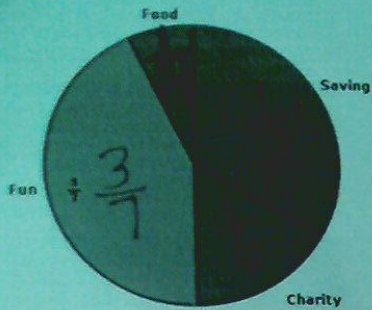
$$3 \times \frac{1}{3}$$

$1 + 1 + 1 = 3$ $\frac{1}{9}$

6. Tell what will happen to the product in this equation.

$$4 \times \boxed{\frac{7}{2}} \bullet > 1$$

The product will be greater than whole number (4)

...tt divides his money into four categories. What fraction of his money does have saving and give to charity? $(2,3,5,7,11)$

Food
Saving
Fun $\div \frac{3}{7}$
Charity

$\frac{1}{3} \times \frac{2}{2} = \frac{2}{6}$
$+ \frac{1}{6} \times \boxed{} = \frac{1}{6}$
$\frac{3}{6} = \frac{1}{2}$

$3 \lfloor 3 \lfloor 6 \quad (LCD)$
$\times 1 \times 2 = 6$

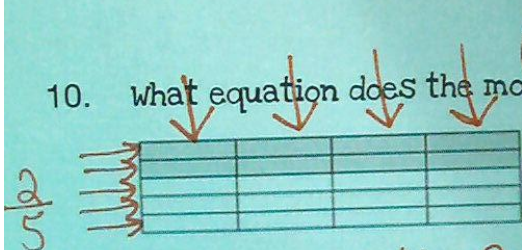8. Which model is shaded to show the product of $\frac{3}{8} \times \frac{1}{4}$?

a. W
b. Y
c. X
d. Z
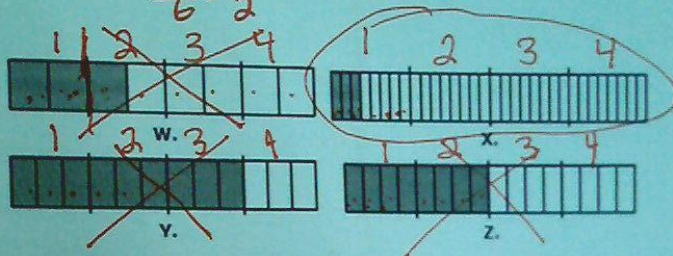
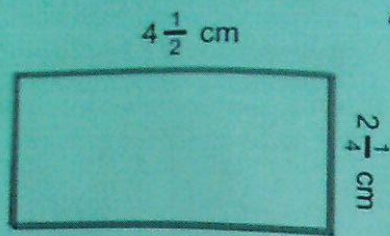$\frac{3}{8} \times \frac{1}{4} = \frac{3}{32}$

9. Solve the following:

$\frac{1}{2} \div 11 = \qquad \frac{1}{2} \times \frac{1}{11} = \frac{1}{22}$

10. What equation does the model below show?

$\frac{2}{5}$

$4 \times \frac{2}{5} = \frac{2}{5} \times 4$

11. Find the area.

$4\frac{1}{2}$ cm

[rectangle] $2\frac{1}{4}$ cm

$8+1$ $8+1$

$\left(4\frac{1}{2}\right) \times \left(2\frac{1}{4}\right)$ $10\frac{1}{8}$

$\frac{9}{2} \times \frac{9}{4} = \frac{81}{8}$

$8\overline{)\frac{81}{-80}}$

12. There are 4 friends that want to share 2 cookies. What fraction of each cookie will each person get?

$\div$

$2 \div 4$

[two cookies] $+$

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

13. Find the sum of this expression. Then simplify.

$\frac{1}{8} + \frac{3}{16} =$

$\frac{1}{8} \times \frac{2}{2} = \frac{2}{16}$

$+ \frac{3}{16} \times \frac{1}{1} = + \frac{3}{16} = \frac{5}{16}$

8	16
4	8
2	4

LCD $=16$

$5\frac{2}{3} \times \frac{3}{3} = \frac{6}{9}$ $3\frac{5}{9}$

$- 2\frac{1}{9} \times \frac{1}{1} = \frac{1}{9}$

$3\frac{5}{9}$

14. Find the value of the expression $5\frac{2}{3}$ $2\frac{1}{9}$ $\frac{5}{16}$

2,3,5,7,11

| 3 | 3 | 9 | LCD |
| x 1 | 3 | =9 |

15. Mrs. Stevens has ten cookies. She divides them evenly among three students. Between which two whole numbers does the number of cookies each student gets lie?

$10 \div 3 = 3\frac{1}{3}$ $3\overline{)10}$ $\frac{9}{1}$

$3 \leftrightarrow 4$

$L \xrightarrow{x} S$

16. Convert to pints: 12 quarts $= 24$ pts

$12 \times 2 = 24$ pts

17. Sadie decorated her horse with ribbons for the Memorial Day Parade. In the mane, She used 5 feet of ribbon. She used an additional 8 inches of ribbon around her front right leg.

How many inches of ribbon did she use altogether for the horse?

1st Step: 5ft = 60 in
5x12

2nd step: Add
60+8 = (68 in)

F → In
L → Sm
x

18. Brody rearranged the entertainment room at his house. Before the move, he had his game console plugged into an electrical cord that was 60 inches long. After he moved everything, he had to add an additional cord that was 2 feet long.
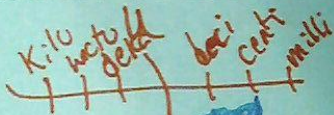
How many feet of electrical cord did he use altogether?

1st Step: 60 in = 5 ft
x 5
12/60

S → L
÷

2nd Step: Add
5 ft
+ 2 ft
(7 ft)

19. Convert to centimeters: 41 meters

Kilo hecto deka bai centi milli

41.00 = 4100 cm

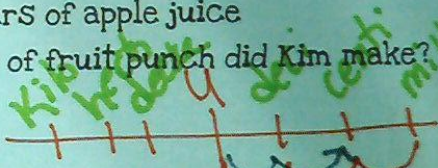20. Kim made 3 batches of this fruit punch recipe.
    Combine:
    40 milliliters of strawberry juice
    400 milliliters of pineapple juice
    2 liters of apple juice
How many liters of fruit punch did Kim make?

Kilo hecto deka U deci centi milli

1st Step
40 mL = .040 L
400 mL = .400

2nd St
Ad
.04
.40
+ 2.0
2.4

(2.440 L)

21. The student council pledged to donate 300 minutes to a local charity during the month of March. The first weekend, they spent 2 hours at the charity.
How many hours did the student council have remaining after the first weekend?

6 4/300
60 300
-300
0

2 1/2

Step 1: 300 min = 5 hrs
Step 2: 5 hrs − 2 hrs = 3 hrs

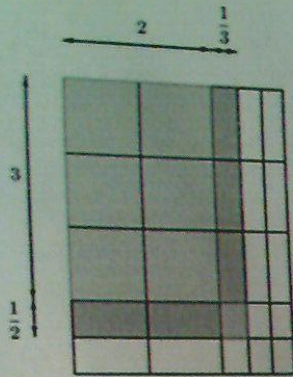22. Hogan's goal is to run (2 2/4) miles a day. He ran ⅔ mile in the morning. He says he still

needs to run 1 ⅛ miles in the afternoon to reach his daily goal.
Is Hogan's statement reasonable? Explain why or why not.

1st: Add:
+ 1 8

=
+ =

3/8 ÷ 24

(1)

23. Find the area.

$2 \quad \frac{1}{3}$

3

$\frac{1}{2}$

$3\frac{1}{2} \times 2\frac{1}{3} = \frac{1}{1}$

24. Which symbol will make this comparison true? $>, <, =$

<1 $\boxed{4/5}$ $\times 10 \underline{\quad < \quad} 10$

25. Convert to pounds: 10 tons $= \underline{20000}$ lbs

Key: 2,000 lbs= 1 ton

$10' \times 2000$

$\overset{\llcorner \to S}{\underset{\times}{}}$

#23. $\overset{+}{3}\overset{\times}{\frac{1}{2}} \times 2\frac{1}{3}$

$\frac{7}{2} \times \frac{7}{3} = \frac{49}{6}$ $\boxed{8\frac{1}{6}}$

$6\overline{)49}$ $^{\times 8}$
$\underline{-48}$
1

24) $\boxed{\frac{4}{5}}^{<1} \times 10 \underline{\quad < \quad} 10$

25) Convert 10 tons $= \underline{20000}$ lbs (pounds)

$10' \times 2000$