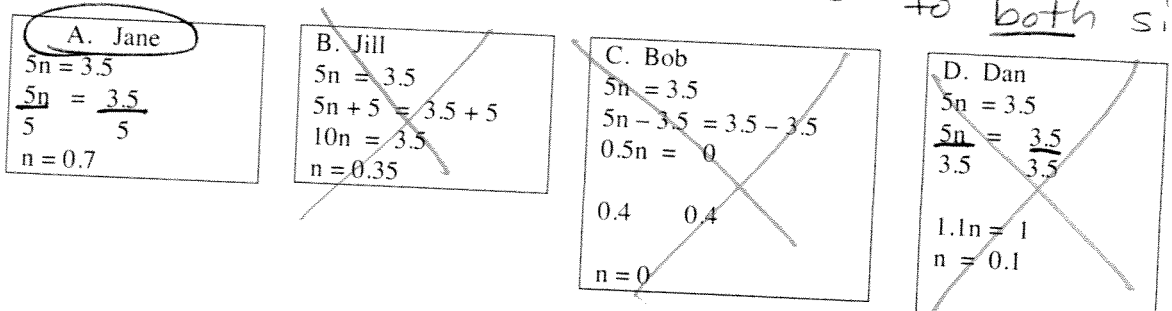
Quarterly Math Review

Name Key

1. Which of the following students evaluated the equation correctly? do the opposite to both sides



A. Jane
$5n = 3.5$
$\frac{5n}{5} = \frac{3.5}{5}$
$n = 0.7$

B. Jill
$5n = 3.5$
$5n + 5 = 3.5 + 5$
$10n = 3.5$
$n = 0.35$

C. Bob
$5n = 3.5$
$5n - 3.5 = 3.5 - 3.5$
$0.5n = 0$
$0.4 \quad 0.4$
$n = 0$

D. Dan
$5n = 3.5$
$\frac{5n}{3.5} = \frac{3.5}{3.5}$
$1.1n = 1$
$n = 0.1$

opposite of multiplying by 5 is ÷ by 5

Jane is correct

2. Audrey has $6\frac{1}{3}$ cups of chocolate chips. She is going to make a batch of cookies each day and each batch will use $1\frac{1}{4}$ cups chocolate chips. How many days will she go until she has used all the chocolate chips? **What operation will you use for this problem?** division

$6\frac{1}{3} \div 1\frac{1}{4}$ $\frac{19}{3} \div \frac{5}{4}$ $\frac{19}{3} \cdot \frac{4}{5}$

see how many $1\frac{1}{4}$s go into $6\frac{1}{3}$

$\frac{76}{15}$ $15\overline{)76}$ $5\frac{1}{15}$

3. Divide and simplify: $1\frac{3}{5} \div 3\frac{3}{10}$ **(what do you have to do FIRST?)** make improper fractions

$\frac{8}{5} \div \frac{33}{10}$ $\frac{8}{\cancel{10}_{1}} \cdot \frac{\cancel{10}^{2}}{33}$

$16/33$

4. Evaluate the expression $4\frac{5}{6} \cdot n$ for $n = 2\frac{1}{5}$ **(what do you have to do FIRST?)**

make improper fractions

$\frac{29}{6} \cdot \frac{11}{5}$ $\begin{array}{r} 29 \\ \times\ 11 \\ \hline 29 \\ 290 \\ \hline 319 \end{array}$ $\frac{319}{30}$ $30\overline{)319}$ $\begin{array}{r} 10 \\ -30 \\ \hline 19 \end{array}$ $10\frac{19}{30}$

6. Jason is making chocolate chip cookies. He has $5\frac{1}{2}$ cups of cookie dough. He will use $\frac{1}{4}$ cup for each cookie. How many cookies can he make?

What operation will you use for this problem? division

$5\frac{1}{2} \div \frac{1}{4}$

$\frac{11}{2} \times \frac{4}{1} = 22$ cookies

7.

Weight	
Ball	**Weight in ounces**
Baseball	$5\frac{1}{4}$ *ounces*
Basketball	$22\frac{1}{5}$ *ounces*
Volleyball	$9\frac{1}{8}$ *ounces*
Soccer ball	$14\frac{7}{8}$ *ounces*

a. What is the difference (subtract) in weight between a volleyball and soccer ball? (bigger)

$14\frac{7}{8} - 9\frac{1}{8}$

$5\frac{6}{8} \div \frac{2}{2} = 5\frac{3}{4}$ ounces

b. What is the difference (subtract) in weight between a basketball and a baseball?

$22\frac{1}{5} \cdot \frac{4}{4} = 22\frac{4}{20} + \frac{20}{20} = \frac{24}{20}$

$- \quad 5\frac{1}{4} \cdot \frac{5}{5} = 5\frac{5}{20}$

$16\frac{19}{20}$ ounces

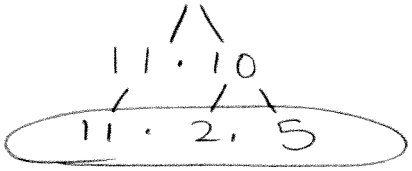
c. What is the total weight (Add) of a baseball and volleyball?

$5\frac{1}{4} \cdot \frac{2}{2} = 5\frac{2}{8}$

$+ \quad 9\frac{1}{8} \cdot \quad = 9\frac{1}{8}$

$14\frac{3}{8}$ ounces

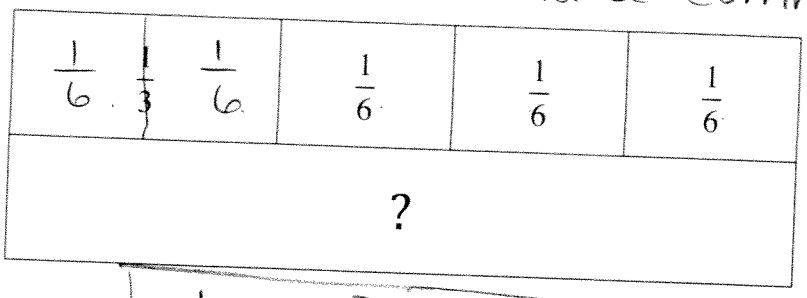
8. Write the prime factorization for 110



9. Write the prime factorization for 29. one is not a prime #

29

10. What equation is shown in the model? Remember...what do you have to do when you add fractions with **unlike** denominators? find a common denominator

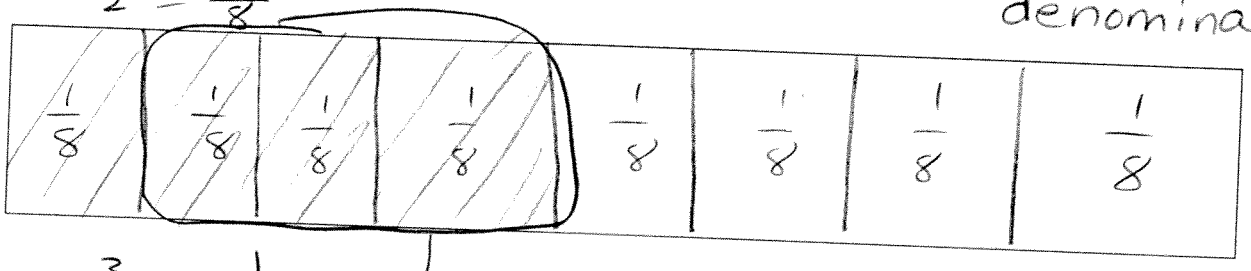


$= \frac{5}{6}$

$\frac{1}{3} + \frac{3}{6} = n$ is the equation

11. Draw a model that shows $\frac{1}{2} - \frac{3}{8}$ Remember....what do you do when you subtraction fractions with unlike denominators? Use the fractions bar below for your model. find common denominator

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



$\frac{1}{2} - \frac{3}{8} = \frac{1}{8}$ → take away

12. $10\frac{2}{5}\ ft$

Matt's Office

$5\frac{1}{4}\ ft$

If the length of Matt's office measures $10\frac{2}{5}\ ft$ and the width measures $5\frac{1}{4}\ ft$, what is the total perimeter of his office? ***How do you find perimeter?*** add all 4 sides

$10\frac{2}{5} + 10\frac{2}{5} + 5\frac{1}{4} + 5\frac{1}{4}$

$20\frac{4}{5} + 10\frac{2}{4}$

$20\frac{4}{5} \cdot \frac{4}{4} = 20\frac{16}{20}$

$10\frac{2}{4} \cdot \frac{5}{5} = 10\frac{10}{20}$

$30\frac{26}{20} = 31\frac{6}{20} \div \frac{2}{2} = 31\frac{3}{10}$

13. Evaluate the express for $6b$ for $b = \frac{7}{9}$ **(Simplify, but LEAVE as an IMPROPER FRACTION)**

$\frac{2\ 6}{1} \cdot \frac{7}{9\ 3} = \frac{14}{3}$

14. Mrs. Beran spent 360 minutes grading papers over the weekend. She spent $\frac{2}{3}$ of her time grading research papers. How many minutes did she spend grading research papers?

$\frac{2}{1\ 3} \times \frac{360^{120}}{1} = 240$ minutes

15. Find the product and simplify: $\frac{3}{7} \cdot \frac{7}{18\ 6} = \frac{1}{6}$

16. What number is represented by the prime factorization: $2 \cdot 2 \cdot 2 \cdot 3 \cdot 5$

$4 \cdot 6 \cdot 5$

$4 \cdot 30 = 120$

17. Five friends went to dinner each paid $5.85. Which equation shows how to find the total amount of dinner? Why? Explain why the other answers are **not** the answer.

A. $t - \$5.85 = 5$
$t = \$10.85$

B. $\frac{t}{5} = \$5.85$
$t = \$29.25$

C. $\frac{5}{t} = \$5.85$
$t = \$1.17$

D. $t - 5 = \$5.85$
$t = \$5.90$

$5 \cdot \$5.85 = t$

total can't be less than what each person paid

Use the table to answer questions 18-20

Ingredients for Sugar Cookies	
Ingredient	**Amount**
all-purpose flour	$2\frac{2}{3}$ cups
baking soda	$\frac{3}{4}$ teaspoon
baking powder	$\frac{1}{2}$ teaspoon
butter, softened	1 cup
white sugar	$1\frac{1}{2}$ cups
egg	1
vanilla extract	$\frac{2}{3}$ teaspoon

18. Caelyn, Parker, and Cooper are making sugar cookies. They only want to make half $\frac{1}{2}$ of the recipe. How much flour will they need?

multiply

$\frac{1}{2} \cdot 2\frac{2}{3} = \frac{1}{2} \cdot \frac{8}{3} = \frac{4}{3} = 1\frac{1}{3}$ cups of flour

19. If they only make $\frac{1}{2}$ recipe, how much vanilla will they need?

$\frac{1}{2} \cdot \frac{2}{3} = \frac{1}{3}$ teaspoon vanilla

20. Mrs. Christiancy loved the sugar cookies so much; she decided that she wants to make $1\frac{1}{2}$ batches of sugar cookies. How much flour does she need for this batch?

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

$\frac{3}{2} \cdot \frac{8}{3} = 4$ cups of flour