Everyday Math - Chapter 5 Study Guide

Name: Key

Example answers!

5A I can decompose, or break, apart fractions.

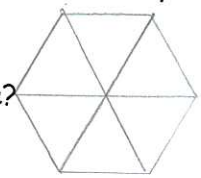
Decompose the fractions in two different ways. Write an equation to show each fraction as a sum of fractions with the same denominator.

$\frac{8}{9}$ = $\frac{5}{9} + \frac{3}{9}$ and $\frac{2}{9} + \frac{2}{9} + \frac{4}{9} = \frac{8}{9}$

$1\frac{4}{5}$ = $\frac{5}{5} + \frac{2}{5} + \frac{2}{5}$ and $\frac{3}{5} + \frac{3}{5} + \frac{3}{5} = \frac{9}{5}$ or $1\frac{4}{5}$

Use your Geometry Template to draw the solution. Then write an equation to show your answer.

If △ is $\frac{1}{6}$, what is the whole?



Equation: $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{6}{6}$ or 1

5B I can add and subtract fractions.

Davin was making some cookies. He added $\frac{1}{4}$ cup of brown sugar, $\frac{1}{4}$ cup of white sugar, and $\frac{2}{4}$ cup of flour. How many cups did he add?

Number model with unknown:

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

Answer: $\frac{4}{4}$ or 1 cups

Use manipulatives or a drawing to help you solve.

$\frac{3}{9} + \frac{3}{9} =$ 6/9

$\frac{20}{100} + \frac{50}{100} =$ 70/100 or 7/10

$\frac{5}{7} - \frac{3}{7} =$ 2/7

$\frac{70}{100} - \frac{60}{100} =$ 10/100 or 1/10

During basketball practice, Olivia drank $\frac{1}{4}$ of a liter of water. Alex drank $\frac{3}{4}$ of a liter of water. How much more did Alex drink than Olivia?

Number model with unknown:

$\frac{3}{4} - \frac{1}{4} = W$

Answer: $\frac{2}{4}$ or $\frac{1}{2}$ of a liter

5C I can add and subtract mixed numbers.

Mrs. Johnson used $1\frac{1}{4}$ cups of popcorn in her snack recipe. Mrs. Theder used $2\frac{1}{4}$ cups of popcorn. How many cups of popcorn did they use together?

Number model with unknown:

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

Answer: $3\frac{2}{4}$ cups of popcorn

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

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Use manipulatives or drawings to help you solve the following problems.

$2\frac{1}{5}+2\frac{2}{5}=$ 4 3/5 $\quad 3\frac{3}{8}+2\frac{3}{8}=$ 5 6/8

$5\frac{4}{7}-4\frac{2}{7}=$ 1 2/7 $\quad 3\frac{5}{6}-2\frac{1}{6}=$ 1 4/6

Paige had $4\frac{3}{5}$ cups of snack mix. She shared some with her friends. At the end of snack time she had $1\frac{1}{5}$ cups of snack mix left. How much snack mix did Paige and her friends eat during snack?

Number model with unknown:

4 3/5 - 1 1/5 = S

Answer: 3 2/5 cups of snack mix

5D I can create a line plot and answer questions using the data.

Use the data to create a line plot and answer questions about it.

The students stacked up the books in their desks and measured the stack to the nearest $\frac{1}{2}$ centimeter. The measurements they gathered were: (see top of next column)

$6\frac{1}{2}, 8\frac{1}{2}, 7, 6\frac{1}{2}, 7\frac{1}{2}, 8, 7, 6\frac{1}{2}, 6\frac{1}{2}, 7\frac{1}{2}, 8$

a. Make a line plot displaying the data. Be sure to include a title and label.

b. What is the length of the largest stack? 8 1/2 cm

c. What is the length of the shortest stack? 6 1/2 cm

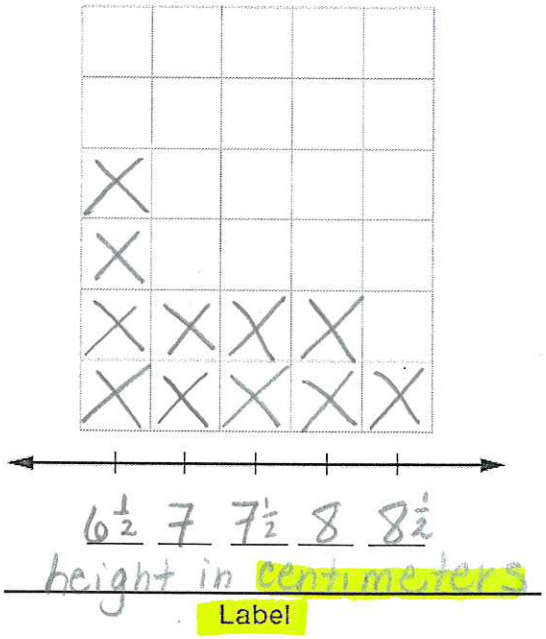
d. What is the difference in length between the largest and shortest stack? Write a number model to show your solution.

8 1/2 - 6 1/2 = h

Answer: 2 cm

Ex: Height of Books in Desk

Title



Label

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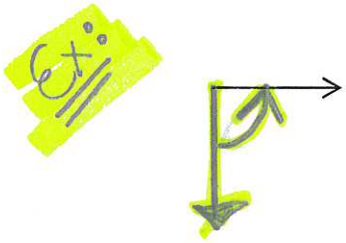
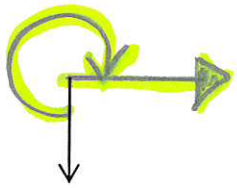
5E I can identify types of rotations and angles.

Draw pictures of these turns, using an arc to show the direction of each one. The vertex of the angle and one side have already been drawn for you.

$\frac{1}{4}$ turn counterclockwise



$\frac{3}{4}$ turn clockwise

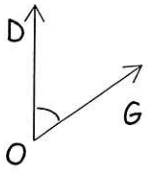


Estimate the size of the angle at right. Circle the best answer.

(0-90 degrees)

90 degrees

90-180

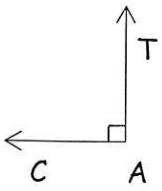


Angle DOG is a(n) acute (acute, obtuse, or right) angle.

0-90 degrees

(90 degrees)

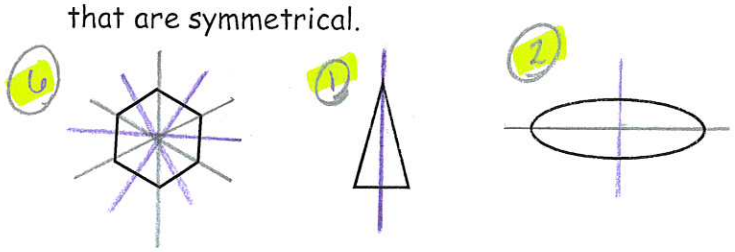
90-180



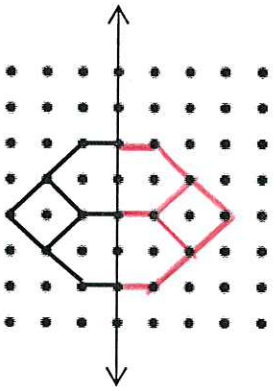
Angle CAT is a(n) right (acute, obtuse, or right) angle.

5F I can draw the matching part of a symmetrical shape.

Draw all the lines of symmetry for the shapes that are symmetrical.

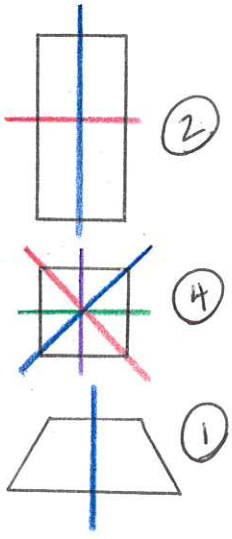


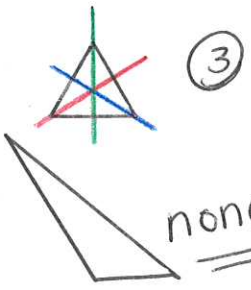
Draw the other half to make a symmetrical shape.

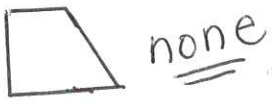


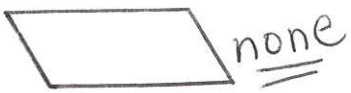
Additional work space:

Lines of Symmetry:









Open-Ended Response example:

It took Jane ½ of an hour to drive from Hopewell to Pittsburgh and ¼ of an hour to drive from Pittsburgh to Oakland. To figure out her total driving time, Jane wrote the following number model:

1/2 + 1/4 = 2/6.

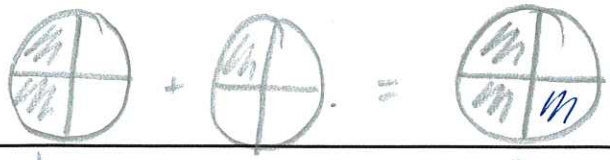
Do you agree that it took her about **2/6** of an hour? No Explain.

(1) We don't add denominators EVER!

(2) We don't add fractions with unlike denominators.

(3) $\frac{1}{2} = \frac{3}{6}$, which is already MORE than $\frac{2}{6}$.

(4) $\frac{1}{2} = \frac{2}{4}$ So... $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$



$\frac{1}{2}$ + $\frac{1}{4}$ = $\frac{3}{4}$

($\frac{2}{4}$)

Unit Fractions: any fraction with "1" as the numerator

(Examples: $1/2$, $1/3$, $1/6$, $1/10$, $1/12$, $1/25$, $1/100$ ...)

Equation as sum of Unit Fractions (example): $\frac{3}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

Also

$$\frac{4}{8} + \frac{6}{8} = \frac{10}{8} \text{ or } 1\frac{2}{8}$$

$$\left(\frac{10}{8} = \frac{8}{8} + \frac{2}{8}\right.$$

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

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borrow $1 = \frac{6}{6}$

add

$$\cancel{3}^{2}\ \frac{\cancel{1}^{7}}{6} - 1\frac{5}{6} = 1\frac{2}{6}$$

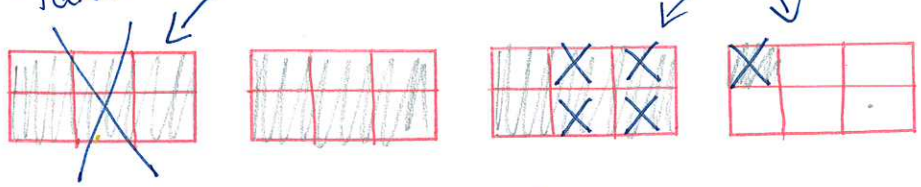
$\left(\frac{6}{6} + \frac{1}{6} = \frac{7}{6}\right)$

OR

Take Away 1 whole

Take Away $5/6$

$3\frac{1}{6} \rightarrow$



$= 1$ whole and $\frac{2}{6}$ left over

$1\frac{2}{6}$

Take Away $1\frac{5}{6}$