

ADDING & SUBTRACTING FRACTIONS

4th Grade

The image displays a collection of math worksheets for 4th-grade students, focusing on adding and subtracting fractions. The worksheets are arranged in a collage, showing various problems and diagrams.

Subtraction Problems:

- 1. $\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$
- 2. $\frac{3}{4} - \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$
- 3. $\frac{6}{5} - \frac{1}{2} = \frac{12}{10} - \frac{5}{10} = \frac{7}{10}$
- 4. $\frac{8}{6} - \frac{4}{6} = \frac{4}{6} = \frac{2}{3}$
- 5. $\frac{7}{10} - \frac{1}{6} = \frac{14}{20} - \frac{3}{20} = \frac{11}{20}$
- 6. $\frac{2}{3} - \frac{1}{6} = \frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{1}{2}$
- 7. $\frac{6}{7} - \frac{2}{7} = \frac{4}{7}$

Decomposing Fractions:

Breaking apart a fraction into smaller pieces

Diagram illustrating the decomposition of $\frac{8}{4}$ into smaller fractions:

- $\frac{8}{4} = 2$ (represented by two whole circles)
- $\frac{8}{4} = \frac{4}{4} + \frac{4}{4}$ (represented by two whole circles)
- $\frac{8}{4} = \frac{2}{4} + \frac{2}{4} + \frac{2}{4} + \frac{2}{4}$ (represented by four half-circles)
- $\frac{8}{4} = \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$ (represented by eight quarter-circles)

Other Worksheets:

- COMPOSING:** Decompose each given fraction into a sum of smaller fractions. Example: $\frac{5}{3} = \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$
- ADDING:** Cora makes a necklace with 10 sea shells, there are an equal amount of the shells are purple? (Illustrated with 10 shells, 3 are red, 3 are green, and 4 are yellow)

Printable & Google Slides



NAME: _____

DATE: _____

DECOMPOSING FRACTIONS

ice cream cones

Directions: Cut out the ice cream scoops at the bottom of the page. Decompose the fractions on each ice cream cone into unit fractions. Paste the correct number of unit fractions on each cone.

DATE: _____

ADDING FRACTIONS

pizza sums

Directions: Find the sum of the fractions. Complete the model to help you.

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

2 $\frac{2}{5} + \frac{3}{5} = \frac{5}{5}$

3 $\frac{1}{8} + \frac{1}{8} = \frac{2}{8}$

4 $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

5 $\frac{2}{3} + \frac{1}{3} = \frac{3}{3}$

6 $\frac{3}{10} + \frac{4}{10} = \frac{7}{10}$

7 $\frac{5}{16} + \frac{5}{16} = \frac{10}{16}$

NAME: _____

DECOMPOSING FRACTIONS

Directions: Cora's seashell jigsaw puzzle has two different toppings. Write the answer as a fraction.

NAME: _____

DECOMPOSING FRACTIONS

Directions: Decompose each fraction into unit fractions with the same denominator.

EX $3\frac{3}{4} = 3 + \frac{3}{4}$

1 $2\frac{5}{8} = 2 + \frac{5}{8}$

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

3 $1\frac{5}{6} = 1 + \frac{5}{6}$

4 $1\frac{4}{10} = 1 + \frac{4}{10}$

5 $2\frac{1}{2} = 2 + \frac{1}{2}$

6 $3\frac{1}{4} = 3 + \frac{1}{4}$

7 $4\frac{3}{8} = 4 + \frac{3}{8}$

NAME: _____

DATE: _____

DECOMPOSING FRACTIONS

using models

Directions: Decompose each fraction into unit fractions. Shade in the models to justify your response.

1 $\frac{3}{5} =$



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



3

4

DECOMPOSING FRACTIONS

Breaking apart a fraction into smaller pieces

 $\frac{3}{4}$ 

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



$\frac{2}{8} + \frac{2}{8}$



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

There can be more than one way to decompose a given fraction!

NG FRACTIONS

DECOMPOSING FRA

decomposing mixed num

Directions: Decompose each mixed number into a sum of whole with the same denominator.

- EX $3\frac{3}{4} = 3 + \frac{3}{4}$
- 1 $2\frac{6}{8} = 2 + \frac{6}{8}$
- 2 $4\frac{2}{5} = 4 + \frac{2}{5}$
- 3 $1\frac{5}{6} = 1 + \frac{5}{6}$
- 4 $3\frac{4}{10} = 3 + \frac{4}{10}$
- 5 $5\frac{9}{12} = 5 + \frac{9}{12}$
- 6 $2\frac{3}{7} = 2 + \frac{3}{7}$

NAME: _____

ADD

Directions: Find the sum of

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

DECOMPOSING FRACTIONS

she sells seashells

Directions: Cora sells jewelry made of seashells. Read the following questions about Cora's seashell jewelry. Color the shells according to each question, then write each answer as a fraction and as a decomposed fraction.

- 1 Cora makes a necklace with 8 seashells. Five of the shells are green, and the rest are yellow. What fraction of the shells are yellow?



- 2 Cora makes a bracelet with 4 sea pink. What fraction of the shells c



- 3 Cora makes a necklace with 10 sea yellow, and 3 shells are red. What i



- 4 Cora makes a necklace with 12 sea shells, there are an equal amount of the shells are purple?



NAME: _____

SUBTRACTIN

Directions: Find the difference between th

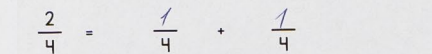
- EX $\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$
- 1 $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$
- 2 $\frac{5}{6} - \frac{3}{6} = \frac{2}{6}$
- 3 $\frac{6}{8} - \frac{4}{8} = \frac{2}{8}$
- 4 $\frac{7}{10} - \frac{6}{10} = \frac{1}{10}$
- 5 $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$
- 6 $\frac{6}{7} - \frac{2}{7} = \frac{4}{7}$

COMPOSING FRA

using models

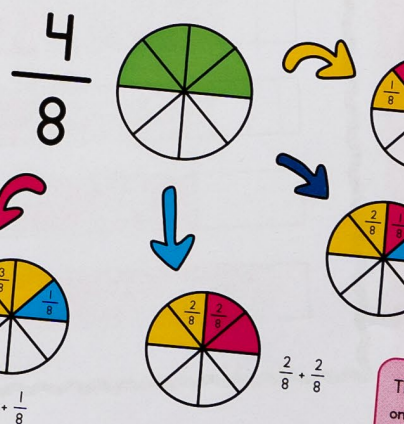
Directions: Decompose each given fraction into a sum of fractions. Write your response.

- $\frac{3}{5} = \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$
- $\frac{2}{4} = \frac{1}{4} + \frac{1}{4}$



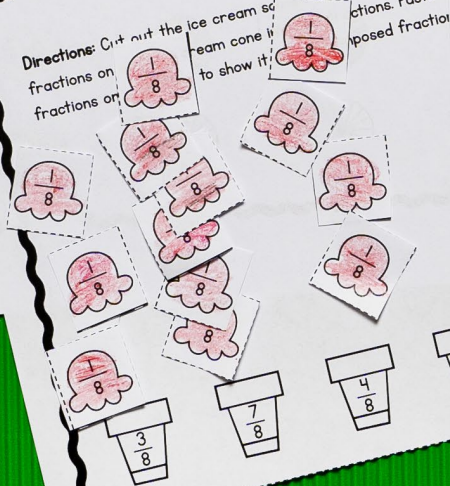
DECOMPOS FRACTION

Breaking apart into smaller



DECOMPOSING FRACTIONS

Directions: Cut out the ice cream scoops at the bottom or the fractions on the ice cream cones to show it. Paste the decomposed fraction on the ice cream cones.



DATE: _____

TONS

COMPOSING

decomposing mi
ose each mixed number into a
ominator.

1 + 1 + 1 + 1 +

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

1 + 1 + 1 + 1 +

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

NAME: _____

Direction

- 1   
- 2 $\frac{2}{5}$  + 5 
- 3 $\frac{1}{8}$  + $\frac{1}{8}$ 
- 4 $\frac{3}{6}$  + $\frac{2}{6}$ 
- 5 $\frac{2}{3}$  + $\frac{1}{3}$ 
- 6 $\frac{3}{10}$  + $\frac{4}{10}$ 
- 7 $\frac{5}{16}$  + $\frac{5}{16}$ 

NAME: _____ DATE: _____

DECOMPOSING FRACTIONS

she sells seashells

Directions: Cora sells jewelry made of seashells. Read the following questions about Cora's seashell jewelry. Color the shells according to each question, then write each answer as a fraction and as a decomposed fraction.

- 1 Cora makes a necklace with 8 seashells. Five of the shells are green, and the rest are yellow. What fraction of the shells are yellow?



FRACTION
 $\frac{3}{8}$

DECOMPOSED FRACTION
 $\frac{1}{8} + \frac{1}{8} + \frac{1}{8}$

- 2 Cora makes a bracelet with 4 seashells. Half of the shells are blue and half pink. What fraction of the shells are yellow?



FRACTION
 $\frac{2}{4}$

DECOMPOSED FRACTION
 $\frac{1}{4} + \frac{1}{4}$

- 3 Cora makes a necklace with 10 seashells. Four shells are blue, 3 shells are yellow, and 3 shells are red. What fraction of the shells are not red?



FRACTION
 $\frac{7}{10}$

DECOMPOSED FRACTION
 $\frac{1}{10} + \frac{1}{10} + \frac{1}{10} +$

- 4 Cora makes a necklace with 12 seashells. Two shells are green. Of the shells, there are an equal amount of pink and purple shells. What fraction of the shells are purple?



FRACTION
 $\frac{5}{12}$

DECOMPOSED FRACTION
 $\frac{1}{12} + \frac{1}{12} +$

NAME: _____

DECOMPOSING FRACTIONS

using model

Directions: Decompose each given fraction into a sum to justify your response.

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



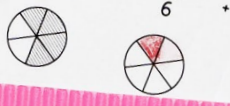
2 $\frac{2}{4} = \frac{1}{4} + \frac{1}{4}$



3 $\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$



4 $\frac{4}{6} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$



NAME: _____

SUBTRACTING FRACTIONS

Directions: Find the difference.

EX $\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$

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

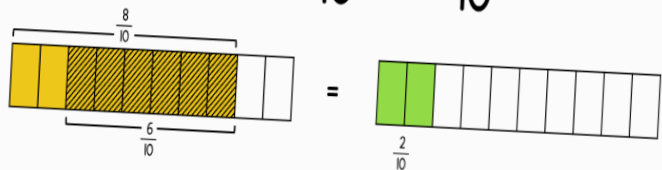
2 $\frac{5}{6} - \frac{1}{6} = \frac{4}{6}$

3 $\frac{8}{6} - \frac{1}{6} = \frac{7}{6}$

4 $\frac{8}{6} - \frac{1}{6} = \frac{7}{6}$

SUBTRACTING FRACTIONS

$$\frac{8}{10} - \frac{6}{10} = \frac{2}{10}$$



When subtracting fractions with like denominators, subtract the numerators and keep the denominator the same.

ADDITION

Directions: Find the

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

DECOMPOSING FRACTIONS

Breaking apart a fraction into smaller pieces



ADDING FRACTIONS

using models

between the fraction

- $\frac{2}{5}$
- $\frac{2}{4}$
- $\frac{2}{7}$

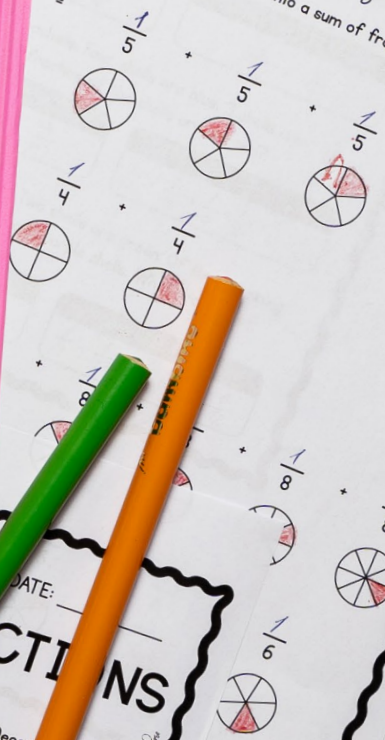
DECOMPOSING FRACTIONS

Directions: Decompose each given fraction into a sum of fractions. To justify your response, use the point bucket tool.

- Cora's seashells rest are
- Cora's pink. W
- Cora's

DECOMPOSING FRACTIONS

Directions: Decompose each given fraction into a sum of fractions. To justify your response, use the point bucket tool.



DECOMPOSING FRACTIONS

using models

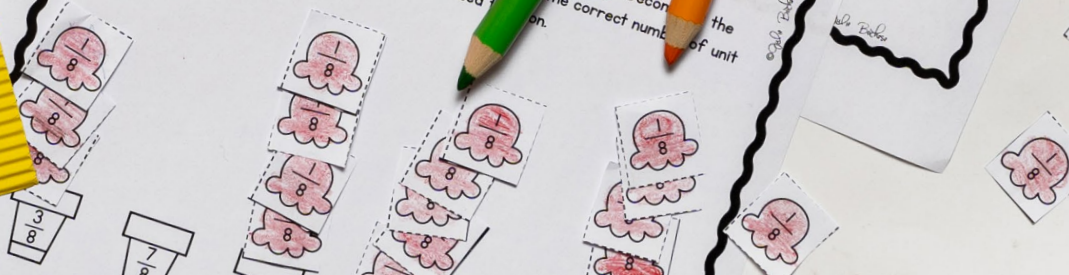
Directions: Decompose each given fraction into a sum of fractions. Shade in the models to justify your response. To shade, click on each part and use the paint bucket tool.

6 $\frac{4}{5} = \frac{}{5} + \frac{}{5} + \frac{}{5} + \frac{}{5}$



ACTIVITIES

Directions: Decompose each given fraction into a sum of fractions. To justify your response, use the point bucket tool.



DECOMPOSING FRACTIONS

Break
into

$$\frac{8}{4}$$



NAME: _____

DECOMPOSING

decomposing mixed

Directions: Decompose each mixed number into a sum of fractions with the same denominator.

$$3 \frac{3}{4} = \boxed{} + \boxed{} + \boxed{} + \boxed{}$$

$$2 \frac{6}{8} = 1 + 1 + \frac{1}{8} + \frac{1}{8}$$

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

$$1 \frac{5}{6} = 1 + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$$

$$3 \frac{4}{10} = 1 + 1 + 1 + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10}$$

$$5 \frac{9}{12} = 1 + 1 + 1 + 1 + 1 + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$2 \frac{3}{7} = 1 + 1 + \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$$

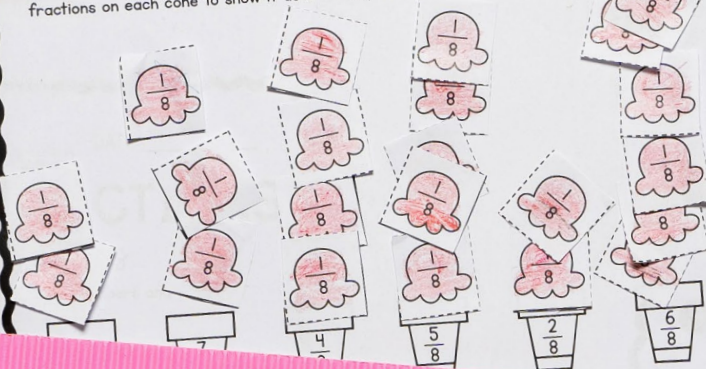
NAME: _____

DATE: _____

DECOMPOSING FRACTIONS

ice cream cones

Directions: Cut out the ice cream scoops at the bottom of the page. Decompose the fractions on each ice cream cone into unit fractions. Paste the correct number of unit fractions on each cone to show it as a decomposed fraction.



NAME: _____

SUBTRACTING FRACTIONS

Directions: Find the difference between the fractions using the number line.

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

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

$$\frac{5}{5} - \frac{3}{6} = \frac{2}{6}$$

$$-\frac{4}{8}$$

NAME: _____

DECOMPOSING

Directions: Cora sells jewelry made from seashells. Color the seashells in the answer as a fraction and as a decimal.

1 Cora makes a necklace with 8 seashells. 3 seashells are yellow. What fraction of the necklace is yellow?

DECOMPOSING FRACTIONS

recomposing mixed numbers

Directions: Each problem shows a mixed number that has been decomposed into whole numbers and fractions. Recompose the mixed number from the sum.

EX $1 + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = 2 \frac{4}{5}$

1 $1 + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \boxed{} \frac{}{}$

2 $1 + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \boxed{} \frac{}{}$

DECOMPOSING FRACTIONS

Break it

$$\frac{4}{8}$$



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

NAME: _____

ADDING

Directions: Find the sum

1 $\frac{1}{4}$

2 $\frac{2}{5}$

3 $\frac{1}{8}$

4 $\frac{3}{6}$

5 $\frac{2}{3}$

6 $\frac{3}{4}$

NAME: _____

DECOMPOSING

Directions: Decompose each fraction with the same denominator.

EX $3\frac{3}{4} = 3 + \frac{3}{4}$

1 $2\frac{6}{8} = 2 + \frac{6}{8}$

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

3 $1\frac{5}{6} = 1 + \frac{5}{6}$

4 $2\frac{4}{7} = 2 + \frac{4}{7}$

NAME: _____ DATE: _____

SUBTRACTING FRACTIONS

using models

Directions: Find the difference between the fractions. Check answers by drawing a model.

EX $\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$



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



2 $\frac{5}{6} - \frac{3}{6} = \frac{2}{6}$



3 $\frac{6}{8} - \frac{4}{8} = \frac{2}{8}$



4 $\frac{7}{10} - \frac{6}{10} = \frac{1}{10}$



5 $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$



6 $\frac{6}{7} - \frac{2}{7} = \frac{4}{7}$



NAME: _____

ADDING

Directions: The PTA at Washington Elementary has boxes below contain the leftover pizza. Draw the pizza in the boxes.

EX

NAME: _____

DECOMPOSING

Directions: Cut out the ice cream cones and glue them on each ice cream cone.

NAME: _____

DEC

DECOMPOSING FRACTIONS

word problems

Directions: Solve the word problems with decomposed fractions.

- 5 Roland is reading a book with 5 chapters of equal length. He has already read 4 of the chapters. What fraction of the book has Roland read? Write your answer as a fraction and as a decomposed fraction.



COMPOSING FRACTIONS

she sells seashells

1 Cora sells jewelry made of seashells. Read the following question. Color the shells according to each question, then write the fraction and as a decomposed fraction.

2 Cora makes a necklace with 8 seashells. Five of the shells are green and 3 are yellow. What fraction of the shells are yellow?



FRACTION
$\frac{3}{8}$

DECOMPOSED FRACTION
$\frac{1}{8} + \frac{1}{8}$

3 Cora makes a bracelet with 4 seashells. Half of the shells are blue and 2 are yellow. What fraction of the shells are yellow?



FRACTION
$\frac{2}{4}$

DECOMPOSED FRACTION
$\frac{1}{4} + \frac{1}{4}$

4 Cora makes a necklace with 10 seashells. Four shells are blue, 3 shells are yellow, and 3 shells are red. What fraction of the shells are not red?



FRACTION
$\frac{7}{10}$

DECOMPOSED FRACTION
$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10}$

5 Cora makes a necklace with 12 seashells. Two shells are green. Of the remaining shells, there are an equal amount of pink and purple shells. What fraction of the shells are purple?



FRACTION
$\frac{5}{12}$

DECOMPOSED FRACTION
$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$

COMPOSITE FRACTIONS

Breaking apart a
into smaller pi

ADDITIONS

$$+ \frac{1}{4} + \frac{1}{4}$$

NAME: _____

DATE: _____

SUBTRACTING FRACTIONS

using models

Directions: Find the difference between the fractions. Check your answers by

EX $\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$



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

2 $\frac{5}{6} - \frac{3}{6} = \frac{2}{6}$

3 $\frac{6}{8} - \frac{4}{8} = \frac{2}{8}$

4 $\frac{7}{10} - \frac{6}{10} = \frac{1}{10}$

NAME: _____

DATE: _____

DECOMPOSING FRACTIONS

Directions: Cut out the ice cream scoops at the bottom of the page. Decompose fractions on each ice cream cone into unit fractions. Paste the fractions on each cone to show it as a decomposed fraction.

NAME: _____

DECOMPOSING FRACTIONS

Directions: Decompose each given fraction to justify your response.

1 $\frac{3}{5} = \frac{1}{5} + \frac{2}{5}$



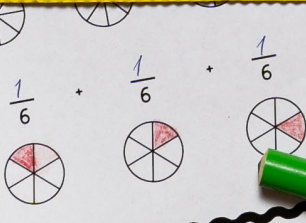
2 $\frac{2}{4} = \frac{1}{4} + \frac{1}{4}$



3 $\frac{5}{8} = \frac{1}{8} + \frac{4}{8}$



4 $\frac{4}{6} = \frac{1}{6} + \frac{3}{6}$



ADDING FRACTIONS

throwing contest

Directions: Four students are having a contest to see who can throw a ball the farthest. They line up at one end of the gym and throw the ball, then let it roll until it stops. Add the fractions and plot each total distance on the number line to find out whose ball traveled the farthest.



Thrown distance: $\frac{1}{5}$ gym length
Rolled distance: $\frac{2}{5}$ gym length
Total distance: $\frac{3}{5}$ gym length

Martina $\frac{3}{5}$ gym length



Thrown distance: $\frac{5}{8}$ gym length
Rolled distance: $\frac{2}{8}$ gym length
Total distance: $\frac{7}{8}$ gym length

Jacob $\frac{7}{8}$ gym length



Thrown distance: $\frac{3}{6}$ gym length
Rolled distance: $\frac{1}{6}$ gym length
Total distance: $\frac{4}{6}$ gym length

Brooks $\frac{4}{6}$ gym length



Thrown distance: $\frac{2}{4}$ gym length
Rolled distance: $\frac{1}{4}$ gym length
Total distance: $\frac{3}{4}$ gym length

Sasha $\frac{3}{4}$ gym length

Drag to plot student's total distance on the number line. Drag the vertical lines to partition as needed.



Drag to partition

Drag to plot

Martina

Jacob

Brooks

Sasha

THE WINNER IS:



ADDING & SUBTRACTING FRACTIONS

4th grade

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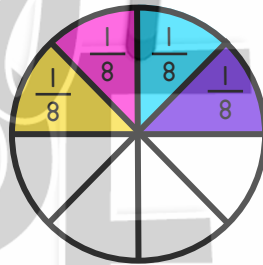
CLICK HERE TO MAKE A COPY OF THIS RESOURCE TO YOUR GOOGLE DRIVE.

* You MUST have a Google account in order to access this resource. [Click HERE](#) if you need help setting up a Google account.

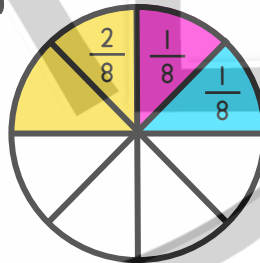
DECOMPOSING FRACTIONS

Breaking apart a fraction
into smaller pieces

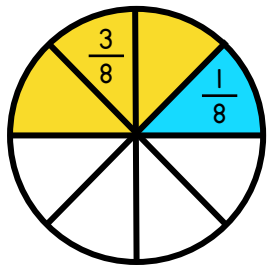
$$\frac{4}{8}$$



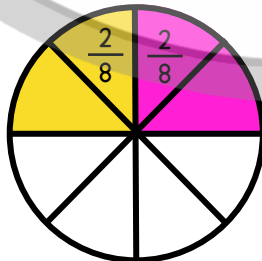
$$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$$



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



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



$$\frac{2}{8} + \frac{2}{8}$$

There can be more than
one way to decompose a
given fraction!

ADDING FRACTIONS

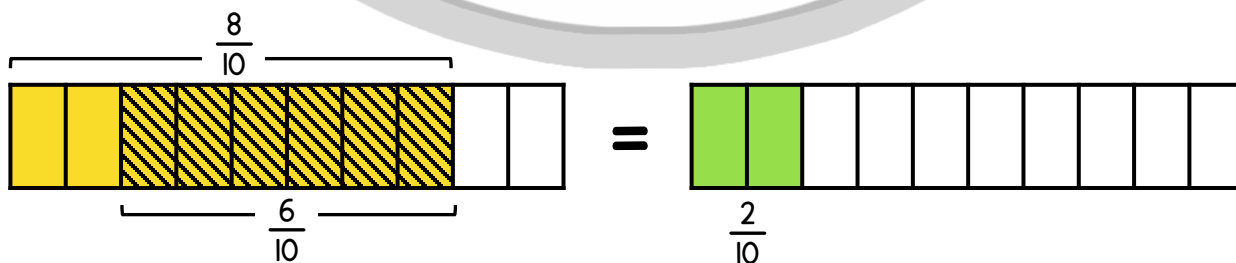
$$\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$$



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

SUBTRACTING FRACTIONS

$$\frac{8}{10} - \frac{6}{10} = \frac{2}{10}$$



When subtracting fractions with like denominators, subtract the numerators and keep the denominator the same.

ADDING & SUBTRACTING MIXED NUMBERS



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

Step 1

Add or subtract the whole numbers

$$2 + 1 = 3$$

Step 2

Add or subtract the fractions

$$\frac{3}{4} + \frac{2}{4} = \frac{5}{4}$$

Step 3

Simplify fraction (if necessary)

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

Step 4

Add simplified fraction to whole number

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

NAME: _____

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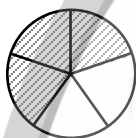
DECOMPOSING FRACTIONS

using models

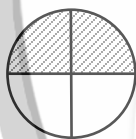
Directions: Decompose each given fraction into a sum of fractions. Shade in the models to justify your response.

1

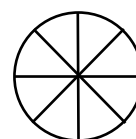
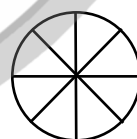
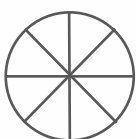
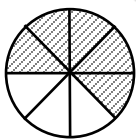
$$\frac{3}{5} = \frac{\quad}{5} + \frac{\quad}{5} + \frac{\quad}{5}$$

**2**

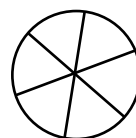
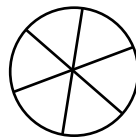
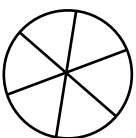
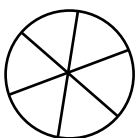
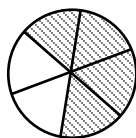
$$\frac{2}{4} = \frac{\quad}{4} + \frac{\quad}{4}$$

**3**

$$\frac{5}{8} = \frac{\quad}{8} + \frac{\quad}{8} + \frac{\quad}{8} + \frac{\quad}{8} + \frac{\quad}{8}$$

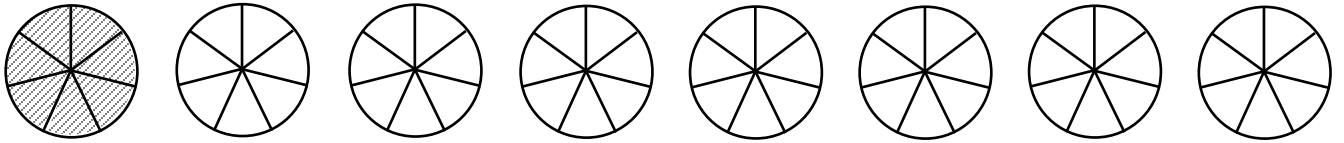
**4**

$$\frac{4}{6} = \frac{\quad}{6} + \frac{\quad}{6} + \frac{\quad}{6} + \frac{\quad}{6}$$



5

$$\frac{7}{7} = \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7}$$

**6**

$$\frac{4}{5} = \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}$$

**7**

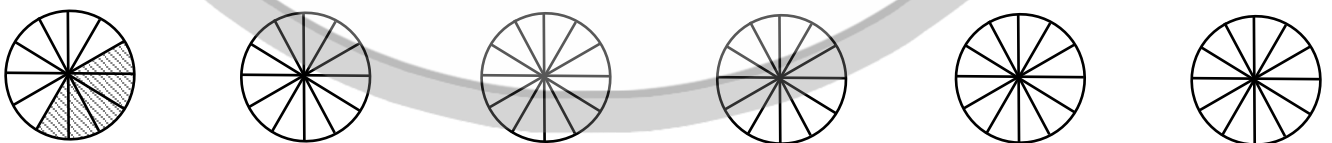
$$\frac{2}{8} = \frac{1}{8} + \frac{1}{8}$$

**8**

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

**9**

$$\frac{5}{12} = \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

**10**

$$\frac{3}{6} = \frac{1}{6} + \frac{1}{6} + \frac{1}{6}$$



NAME: _____

DATE: _____

DECOMPOSING FRACTIONS

she sells seashells

Directions: Cora sells jewelry made of seashells. Read the following questions about Cora's seashell jewelry. Color the shells according to each question, then write each answer as a fraction and as a decomposed fraction.

- 1** Cora makes a necklace with 8 seashells. Five of the shells are green, and the rest are yellow. What fraction of the shells are yellow?



FRACTION

DECOMPOSED FRACTION

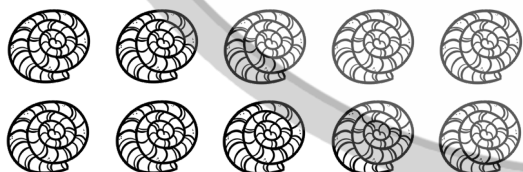
- 2** Cora makes a bracelet with 4 seashells. Half of the shells are blue, and half are pink. What fraction of the shells are blue?



FRACTION

DECOMPOSED FRACTION

- 3** Cora makes a necklace with 10 seashells. Four shells are blue, 3 shells are yellow, and 3 shells are red. What fraction of the shells are not red?



FRACTION

DECOMPOSED FRACTION

- 4** Cora makes a necklace with 12 seashells. Two shells are green. Of the remaining shells, there are an equal amount of pink and purple shells. What fraction of the shells are purple?



FRACTION

DECOMPOSED FRACTION

NAME: _____

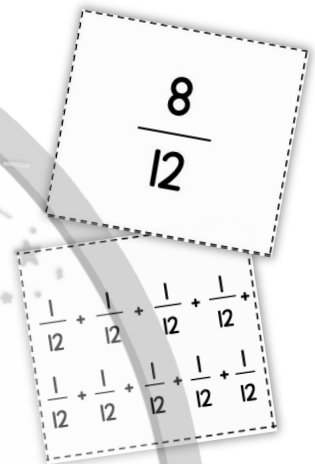
DATE: _____

DECOMPOSING FRACTIONS

memory

Directions:

1. Cut out and shuffle the cards.
2. Place them face down in neat rows.
3. Flip over any two cards, trying to create a match between a fraction and the decomposed version of that fraction.
4. If you get a pair, keep the matching cards.
5. If you do not get a pair, flip the cards back over.



Play one of three ways:

INDEPENDENTLY

Time yourself. How quickly can you find all the matches?

COLLABORATIVELY

Work cooperatively with a partner to see how quickly you can find all the matches together.

COMPETITIVELY

Take turns with a partner, flipping over two cards per turn. Who can get more matches?

Be sure to pay close attention to the cards the other player turns over!



DECOMPOSING FRACTIONS

memory

©Julie Bachore



$$\frac{3}{12}$$

$$\frac{1}{12} + \frac{1}{12} +$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} +$$

$$\frac{7}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$\frac{1}{12} + \frac{1}{12}$$

$$\frac{8}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} +$$

$$\frac{2}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$\frac{4}{12}$$

$$\frac{10}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$\frac{6}{12}$$

$$\frac{1}{12} + \frac{1}{12} +$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} +$$

$$\frac{9}{12}$$

$$\frac{1}{12} + \frac{1}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$\frac{11}{12}$$

$$\frac{5}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} +$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} +$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

$$\frac{1}{12} + \frac{1}{12} + \frac{1}{12} + \frac{1}{12}$$

NAME: _____

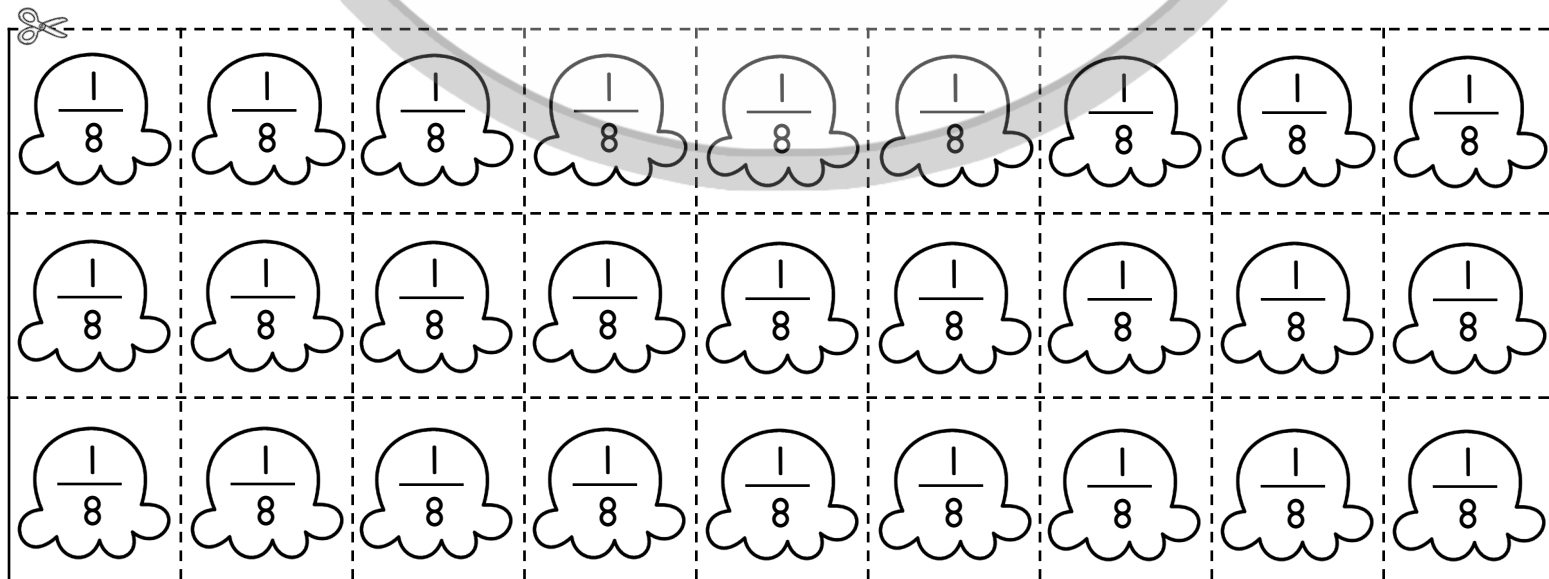
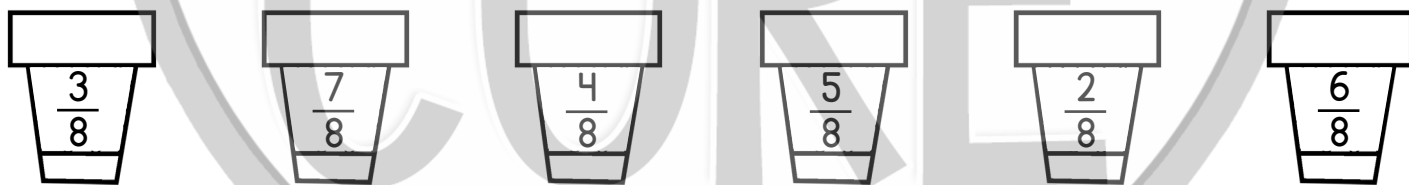
DATE: _____

DECOMPOSING FRACTIONS

ice cream cones

Directions: Cut out the ice cream scoops at the bottom of the page. Decompose the fractions on each ice cream cone into unit fractions. Paste the correct number of unit fractions on each cone to show it as a decomposed fraction.

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NAME: _____

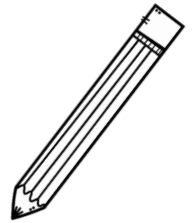
DATE: _____

DECOMPOSING FRACTIONS

word problems

Directions: Solve the word problems with decomposed fractions.

- 1** Sven has 8 pencils in his pencil case. Four of the pencils have broken tips. What fraction of Sven's pencils have broken tips? Write your answer as a fraction and as a decomposed fraction.



- 2** Marcella has 15 songs on her playlist. Of the 15 songs, 12 of them are classical music. What fraction of Marcella's playlist is classical music? Write your answer as a fraction and as a decomposed fraction.



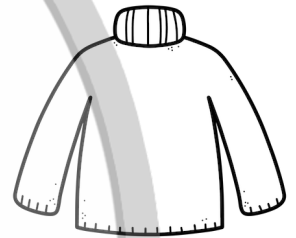
3

Sarah is watching a video that is 10 minutes long. She has 3 minutes left of the video to watch. What fraction of the video has Sarah not watched yet? Write your answer as a fraction and as a decomposed fraction.



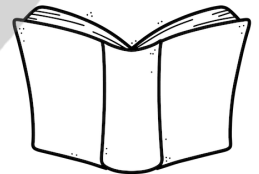
4

There are 6 red sweaters for sale at a department store. At the end of the day, 2 of the sweaters have been sold. What fraction of the sweaters were sold today? Write your answer as a fraction and as a decomposed fraction.



5

Roland is reading a book with 5 chapters of equal length. He has already read 4 of the chapters. What fraction of the book has Roland read? Write your answer as a fraction and as a decomposed fraction.



NAME: _____

DATE: _____

SUBTRACTING FRACTIONS

using models

Directions: Find the difference between the fractions. Check your answers by drawing a model.

EX $\frac{4}{5} - \frac{2}{5} = \frac{\boxed{2}}{\boxed{5}}$



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



2 $\frac{5}{6} - \frac{3}{6} = \frac{\boxed{}}{\boxed{}}$



3 $\frac{6}{8} - \frac{4}{8} = \frac{\boxed{}}{\boxed{}}$



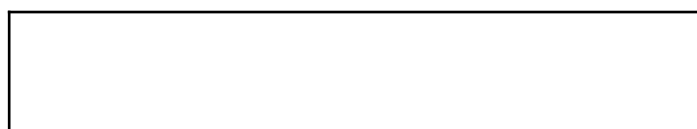
4 $\frac{7}{10} - \frac{6}{10} = \frac{\boxed{}}{\boxed{}}$



5 $\frac{2}{3} - \frac{1}{3} = \frac{\boxed{}}{\boxed{}}$



6 $\frac{6}{7} - \frac{2}{7} = \frac{\boxed{}}{\boxed{}}$



NAME: _____

DATE: _____

SUBTRACTING FRACTIONS

finding differences

Directions: Find the differences between the fractions.

1 $\frac{3}{5} - \frac{2}{5} = \frac{\boxed{}}{\boxed{}}$

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

3 $\frac{4}{4} - \frac{3}{4} = \frac{\boxed{}}{\boxed{}}$

4 $\frac{8}{12} - \frac{5}{12} = \frac{\boxed{}}{\boxed{}}$

5 $\frac{2}{8} - \frac{2}{8} = \frac{\boxed{}}{\boxed{}}$

6 $\frac{6}{7} - \frac{4}{7} = \frac{\boxed{}}{\boxed{}}$

7 $\frac{8}{10} - \frac{3}{10} = \frac{\boxed{}}{\boxed{}}$

8 $\frac{6}{9} - \frac{5}{9} = \frac{\boxed{}}{\boxed{}}$

9 $\frac{4}{5} - \frac{2}{5} = \frac{\boxed{}}{\boxed{}}$

10 $\frac{5}{7} - \frac{3}{7} = \frac{\boxed{}}{\boxed{}}$

11 $\frac{9}{12} - \frac{6}{12} = \frac{\boxed{}}{\boxed{}}$

12 $\frac{12}{15} - \frac{11}{15} = \frac{\boxed{}}{\boxed{}}$

13 $\frac{17}{20} - \frac{10}{20} = \frac{\boxed{}}{\boxed{}}$

14 $\frac{65}{100} - \frac{23}{100} = \frac{\boxed{}}{\boxed{}}$

NAME: _____

DATE: _____

MIXED NUMBERS

subtracting with models

Directions: Find the difference between the mixed numbers. Draw a model to show your thinking.

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

MODEL


2 $4\frac{6}{8} - 2\frac{5}{8} =$

MODEL


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

MODEL


4 $7\frac{5}{6} - 4\frac{4}{6} =$

MODEL


5 $6\frac{2}{3} - 5\frac{2}{3} =$

MODEL


6 $1\frac{5}{9} - 1\frac{3}{9} =$

MODEL


NAME: _____

DATE: _____

MIXED NUMBERS

subtracting

Directions: Find the difference between the mixed numbers.

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

2 $4\frac{4}{8} - 3\frac{2}{8} =$

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

4 $6\frac{3}{5} - 4\frac{2}{5} =$

5 $3\frac{3}{4} - 3\frac{1}{4} =$

6 $5\frac{6}{7} - 4\frac{4}{7} =$

7 $6\frac{6}{9} - 5\frac{3}{9} =$

8 $8\frac{2}{3} - 6\frac{1}{3} =$

9 $4\frac{4}{8} - 1\frac{2}{8} =$

10 $9\frac{8}{10} - 5\frac{5}{10} =$

11 $2\frac{4}{5} - 2\frac{3}{5} =$

12 $7\frac{7}{12} - 3\frac{4}{12} =$

NAME: _____

DATE: _____

ADDING/SUBTRACTING FRACTIONS & MIXED NUMBERS

word problems

Directions: Answer the word problems by adding and subtracting fractions and mixed numbers.

- 1** A baseball weighs $\frac{3}{10}$ of a pound. A golf ball weighs $\frac{1}{10}$ of a pound. How much more does the baseball weigh than the golf ball?



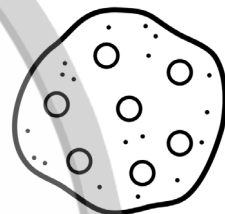
- 2** Jurgen is building a treehouse. The walls of his treehouse are $6\frac{5}{6}$ feet tall. The roof of the treehouse is an additional $3\frac{5}{6}$ feet tall. What is the total height of the treehouse?



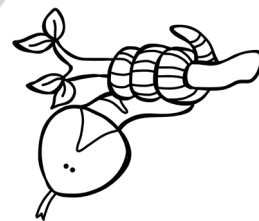
- 3 The Ortiz family rents a canoe. They pay for $2\frac{1}{4}$ hours. After $1\frac{2}{4}$ hours, how much time does the Ortiz family have left for their canoe rental?



- 4 Anya is baking cookies. $\frac{4}{8}$ of the batch is chocolate chip, $\frac{2}{8}$ of the batch is oatmeal raisin, and the remainder of the batch is sugar. What fraction of the batch of cookies are sugar cookies?



- 5 At the snake habitat at the zoo, the king cobra is $10\frac{3}{5}$ feet long. The Burmese python is $10\frac{2}{5}$ feet long, and the Green anaconda is $10\frac{1}{5}$ feet long. How much longer is the longest snake than the shortest snake?



NAME: _____

DATE: _____

ADDING/SUBTRACTING FRACTIONS & MIXED NUMBERS

test

Directions: Solve the addition and subtraction problems.

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

2 $\frac{6}{8} - \frac{4}{8} =$

3 $\frac{5}{7} - \frac{1}{7} =$

4 $\frac{4}{5} + \frac{1}{5} =$

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

6 $\frac{6}{9} - \frac{3}{9} =$

7 $\frac{9}{12} - \frac{7}{12} =$

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

Directions: Solve the addition and subtraction problems.

9 $2\frac{3}{5} + 2\frac{2}{5} =$

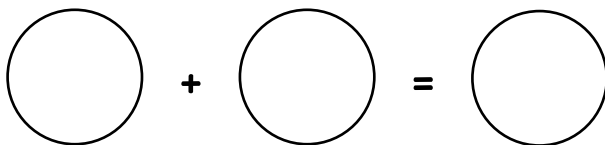
10 $4\frac{7}{8} - 1\frac{3}{8} =$

11 $5\frac{8}{10} - 3\frac{6}{10} =$

12 $4\frac{3}{6} + 6\frac{5}{6} =$

Directions: Find the sum of the fractions. Justify your answers by completing the models.

13 $\frac{3}{6} + \frac{2}{6} = \frac{\boxed{}}{\boxed{}}$



14 $\frac{2}{4} + \frac{1}{4} = \frac{\boxed{}}{\boxed{}}$



15 $\frac{5}{8} + \frac{3}{8} = \frac{\boxed{}}{\boxed{}}$



16 $\frac{2}{5} + \frac{2}{5} = \frac{\boxed{}}{\boxed{}}$



Directions: Find the difference between the fractions. Justify your answers by completing the models.

17 $\frac{6}{8} - \frac{2}{8} = \frac{\boxed{}}{\boxed{}}$

18 $\frac{5}{7} - \frac{3}{7} = \frac{\boxed{}}{\boxed{}}$

19 $\frac{9}{10} - \frac{6}{10} = \frac{\boxed{}}{\boxed{}}$

20 $\frac{3}{4} - \frac{1}{4} = \frac{\boxed{}}{\boxed{}}$

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