
$\qquad$


The average person creates 4.4 pounds of trash per day. That's more than 1,600 pounds of trash every year! It's estimated that about $75 \%$ of that trash is made from recyclable materials, like plastic, paper, and aluminum. How many of those recyclable materials make up your trash? Follow the steps below to find out!

STEP 1. Use the table below to record each type of recyclable item (plastic, paper, and aluminum) you find in your lunch for one 5-day school week. Mark a tally in the appropriate box each time you recycle that type of item. At the end of the week, count the tallies in each column to find the total number of items in each category you recycled.

|  | Plastic | Paper | Aluminum |
| :---: | :---: | :---: | :---: |
| Day 1 |  |  |  |
| Day 2 |  |  |  |
| Day 3 |  |  |  |
| Day 4 |  |  |  |
| Day 5 |  |  |  |
| Total Items: |  |  |  |

$\qquad$

## Record Your Recycling

STEP 2. Use the template below to create a bar graph that shows the total number of items of each material you recycled for one 5 -day school week. Be sure to shade in the appropriate number of bars, add a title, and label the $x$ - and $y$-axes.

Title: $\qquad$

$x$-axis: $\qquad$

STEP 3. Answer the following questions on a separate sheet of paper using the data from your graph.

1. List the types of waste materials you recycled for one school week in order from least number of items to greatest.
2. Was there anything surprising about your results? Explain.
3. What are some ways you can reduce the amount of materials that you discard, either by throwing them away or recycling?

## Modeling Fractions With Tape Diagrams

Read each question below to solve problems involving fractions and tape diagram models.

1. Draw a line to match each fraction with its corresponding tape diagram.

2. Shade in the tape diagrams to show each fraction on the left.
$\frac{5}{8}$

$\frac{7}{12}$


$$
\frac{3}{4}
$$


3. Which tape diagram shows $\frac{5}{12}$ ?
A.

B.

C.

4. Shade in the tape diagram to show a fraction that is larger than $\frac{4}{10}$. Then write your fraction.

|  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |

5. Complete the tape diagrams to show each fraction.
$\square$
$\frac{3}{5}$


BONUS: Name a fraction that is greater than $\frac{5}{7}$ but does not have a denominator of 7. Draw tape diagrams to prove that your fraction is greater than $\frac{5}{7}$.

DynaDash: Grade 3
Fraction Circle Comparisons
Shade in the part(s) of the fraction for each fraction circle model below. Then write > (greater than), < (less than), or = (equal to) in each box to compare them. We did the first one for you.
1.


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

5. 



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

2. 



$$
\frac{2}{4} \square \frac{3}{4}
$$

3. 



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

6. 


$\frac{3}{6}$ $\square$ $\frac{3}{4}$
7.

8.

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

BONUS: Shade in the following fractions using the fraction circles to the right: $\frac{3}{5}, \frac{3}{8}, \frac{3}{6}$. Then order the fractions from smallest to largest.


LP1^ $\begin{aligned} & \text { FRACTION COMPARISONS }\end{aligned}$

NAME $\qquad$

## Ordering Fractions

1. Use the fraction circle models below to order the fractions from smallest to largest.

$\frac{3}{7}$

$\frac{3}{4}$

$\frac{1}{7}$

4A. Place the following fractions in order from largest to smallest: $\frac{4}{10}, \frac{7}{10}, \frac{3}{10}, \frac{6}{10}$.

4B. Explain how you determined which fraction was the smallest.

5A. Place the following fractions in order from smallest to largest: $\frac{3}{4}, \frac{8}{9}, \frac{3}{6}$.

5B. What strategy did you use to order your fractions?
6. Which set of fractions is in order from smallest to largest?
(A) $\frac{7}{8}, \frac{4}{8}, \frac{4}{10}$
(C) $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}$
(B) $\frac{2}{5}, \frac{2}{3}, \frac{1}{3}$
(ㄷ) $\frac{4}{12}, \frac{7}{12}, \frac{7}{8}$

BONUS: The fraction models below are in order from largest to smallest. Fill in the blank with a fraction that will keep the correct order. Then represent your fraction in the blank tape diagram model.

$\frac{4}{5}$

$\underline{\square}$

$\frac{3}{10}$

Fraction Bars

| 1 Whole |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\frac{1}{2}$ |  |  |  |  |  | $\frac{1}{2}$ |  |  |  |  |  |
| $\frac{1}{3}$ |  |  |  | 1 |  |  |  | $\frac{1}{3}$ |  |  |  |
| $\frac{1}{4}$ |  |  | $\frac{1}{4}$ |  |  | $\frac{1}{4}$ |  |  | $\frac{1}{4}$ |  |  |
| $\frac{1}{5}$ |  | $\frac{1}{5}$ |  |  | 1 |  | $\frac{1}{5}$ |  |  | $\frac{1}{5}$ |  |
| $\frac{1}{6}$ |  | $\frac{1}{6}$ |  | $\frac{1}{6}$ |  | $\frac{1}{6}$ |  | $\frac{1}{6}$ |  | $\frac{1}{6}$ |  |
| $\frac{1}{8}$ | $\frac{1}{8}$ |  | $\frac{1}{8}$ |  | $\frac{1}{8}$ | $\frac{1}{8}$ | $\frac{1}{8}$ |  | $\frac{1}{8}$ |  | $\frac{1}{8}$ |
| $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ |  | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ | $\frac{1}{10}$ |  | $\frac{1}{10}$ | $\frac{1}{10}$ |
| $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | $\frac{1}{12}$ | 12 |

LP2 $\downarrow$ DIVISION

NAME $\qquad$

## Racing Remainders

Work with a partner to solve division with remainder problems to move your game piece (counter, coin, etc.) around the game board. You will need a game piece for each player. Cut out the division cards on page 2 and place them in a pile face down. Taking turns with your partner, draw a division card one at a time from the pile. Solve your problem on a separate sheet of paper. Your remainder is the amount of spaces you can move your game piece.

The first player to reach the end wins!

$\qquad$

## Racing Remainders



## DynaDash: Grade 4 Division With Remainders

Use the standard algorithm (or a method of your choice) to find the quotient with remainder for each division problem below. We did the first one for you.

| 1. $\begin{array}{r} 135 R 3 \\ 6 \longdiv { 8 1 3 } \\ \frac{-6 \downarrow}{21} \\ \frac{-18 \downarrow}{33} \\ \hline-30 \\ \hline 3 \end{array}$ | 4. $4 \longdiv { 5 3 4 }$ | 7. $6 \longdiv { 2 , 3 9 5 }$ |
| :---: | :---: | :---: |
| 2. $5 \longdiv { 2 4 }$ | 5. $3 \longdiv { 7 1 3 }$ | 8. $9 \longdiv { 5 , 7 0 4 }$ |
| 3. $8 \longdiv { 7 9 }$ | 6. $2 \longdiv { 9 7 1 }$ | 9. $7 \longdiv { 6 , 0 0 8 }$ |

LP24 DIVISION WITH REMAINDERS

NAME

## Interpreting Remainders

## Drop the Remainder

Sometimes you will need all groups to have the same amount.

Example: Morrison is selling boxes of 8 cookies. He bakes 60 cookies. How many full boxes can he sell?
$60 \div 8=7$ R $4 \leftarrow$ Drop the remainder since you need 8 cookies to fill a box.

So Morrison will sell 7 boxes of cookies.

## Use the Remainder

Sometimes you will need to know how many/much will be left over or remaining.

Example: Morrison is selling boxes of 8 cookies. He bakes 60 cookies. How many cookies will be left over?
$60 \div 8=7 R 4 \leftarrow$ Use the remainder to determine how many cookies will be left.

## So Morrison will have 4 cookies

 left over.
## Add 1 More to the Quotient

Sometimes you will need to add one more group, which is like adding 1 to your quotient.

Example: Morrison bakes 60 cookies. He brings all of them to his school in containers that fit 8 each. How many containers did he bring?
$60 \div 8=7 R 4 \leftarrow$ Add 1 more to the quotient because if only 7 containers are brought, 4 cookies will be left out.

So he will need 8 containers for his cookies.

1. A troop's scoutmaster purchases 20 batteries for flashlights. Each flashlight uses 3 batteries. How many flashlights can the scoutmaster fill with batteries? What will you do with the remainder?
(A) 6 flashlights; drop the remainder
(B) 2 flashlights; use the remainder
(C) 7 flashlights; add 1 more to the quotient
2. Marcy has a pitcher with 110 fluid ounces ( fl oz ) of orange juice. She fills glasses with 8 oz of juice until there is not enough juice left in the pitcher to fill another glass. How many fluid ounces of juice are remaining? What will you do with the remainder?
(A) 13 fl oz ; drop the remainder
(B) 6 fl oz; use the remainder
(C) 14 fl oz ; add 1 more to the quotient

3A. Chris puts 98 baseball cards in his collector's binder. Each page has slots for 12 cards. How many pages will he use to hold all of his cards?

3B. What did you do with the remainder? Explain.

4A. Syreena is moving to a new house. Her mom asks her to pack up 93 books into small heavy-duty boxes. Each box can hold 12 books. How many boxes can she fill completely?

4B. What did you do with the remainder? Explain.

BONUS: Mr. Jones purchases 6 bags of mechanical pencils for his students. Each bag contains 12 pencils. He puts an equal number of pencils into each of 7 pencil holders. How many mechanical pencils were left over?

LP3 $\downarrow$ vOcABULARY

NAME $\qquad$

## Coordinate Grid Crossword


*NOTE: Hyphens (-) and spaces are not included in the words for the crossword puzzle. Write only the letters of the words in each box.


## ACROSS

1. $A(n)$ $\qquad$ is written in the specific order of $(x, y)$.
2. When two lines meet or cross at a common point
3. An ordered pair is marked by $a(n)$ $\qquad$ on a coordinate grid.
4. A coordinate plane is made up of four of these

## DOWN

1. The point $(0,0)$ where the $x$-axis and $y$-axis intersect on a coordinate grid
2. To mark a point on a graph or map
3. The number in an ordered pair that is listed second
4. The $y$-axis is a(n) $\qquad$ number line in a coordinate grid.
5. The horizontal number line on a coordinate grid

BONUS: Create your own crossword puzzle about another math topic or skill. Then challenge a partner to complete it.

DynaDash: Grade 5
Graphing and Identifying Ordered Pairs on a Coordinate Grid
Graph each ordered pair on the coordinate grid below. Then label the point with its corresponding letter.
Ordered Pairs

| $\mathbf{C}(4,3)$ | $\mathbf{I}(19,8)$ | $\mathbf{M}(18,19)$ | $\mathbf{W}(17,2)$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{F}(9,6)$ | $\mathbf{K}(2,13)$ | $\mathbf{T}(10,0)$ | $\mathbf{V}(11,9)$ |



Use the coordinate grid above to identify each ordered pair and write its corresponding letter on each blank line to reveal the answer to the following riddle: What is a panda's favorite ice pop flavor?
$\overline{(6,1)}$ $\overline{(8,12)} \quad \overline{(19,4)} \quad \overline{(20,11)}$
 $\overline{(14,5)}$

$\overline{(16,15)} \quad \overline{(3,17)} \quad \overline{(1,7)}$

## Graphing Ordered Pairs on a Coordinate Plane

A coordinate plane is made up of 4 quadrants. You can move along the $x$ - and $y$-axes in both directions depending on whether you are plotting a positive or a negative coordinate. When plotting negative values for the $x$-coordinate, start at the origin and move to the left. For negative $y$-coordinates, start at the origin and move down.


Plot the following points on the coordinate plane to the right.

1. Point $D(4,-7)$
2. Point $H(6,3)$
3. Point $L(-4,-8)$
4. Point $N(8,0)$
5. Point $R(-3,4)$

Fill in the ordered pairs to list the coordinates for the following points plotted on the coordinate plane.
6. Point F (__ , __ )
7. Point J ( $\qquad$ ,
8. Point V ( $\qquad$ , _)
9. Point W ( $\qquad$ , _)
10. Point $Z$ ( $\qquad$ )


