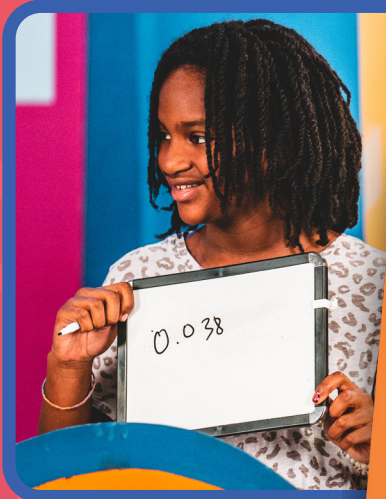


SUPER-DUPER
Math
POWER PACKET



**RISE
AND
SHINE**



Fun learning activities for K-5th grade!

Arkansas  **PBS**



Rise and Shine!

¡Este paquete también está disponible en español!

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Welcome, friends! We're glad you are joining us for our "Rise and Shine" summer learning adventure! We have a lot of fun learning planned and some great teachers leading us along the way. This Power Packet contains lots of different lessons and activities for you to choose from. You can also watch "Rise and Shine" on TV, on our website, or by streaming it. You will see some fantastic PBS KIDS shows, mini lessons with some of Arkansas's best teachers, video field trips to interesting places all around our state, cool new songs and dance videos, and more!

In addition to these activities, you can visit myarkansaspbs.org/riseandshine for mini lessons with some of the best teachers in Arkansas along with other fun content to continue learning at home!

Power Packet Guide:

- Kids in K-2nd grade – Start on page 3.
- Kids in 3rd-5th grade – Start on page 9.
- Parents & caregivers – Start on page 15.



Pennies and Dimes (K-2)

Power Goal: Identify pennies and dimes and their values.

Learning Choices:

This is a picture of a penny . This is a picture of a dime .

A. Finish the sentences by writing the correct number of dimes and pennies shown. To help you count, draw a line through each dime and each penny as you count.

Example:

This picture shows 3 dimes and 5 pennies.



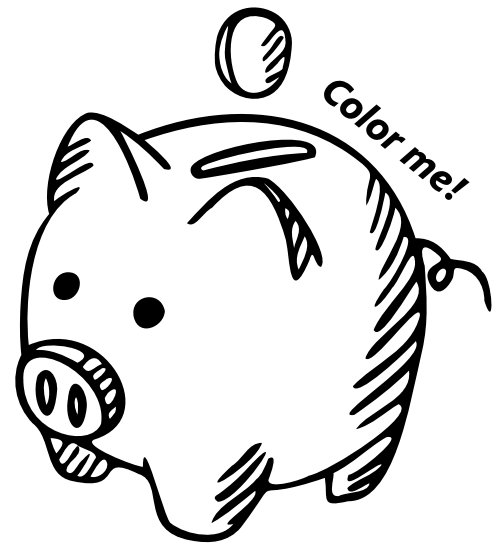
1. This picture shows _____ dimes and _____ pennies.



2. This picture shows _____ dimes and _____ pennies.



3. This picture shows _____ dimes and _____ pennies.



B. One penny equals one cent. One dime is equal to 10 cents.

1. How many cents does the picture show?



cents

2. How many cents does the picture show?



cents

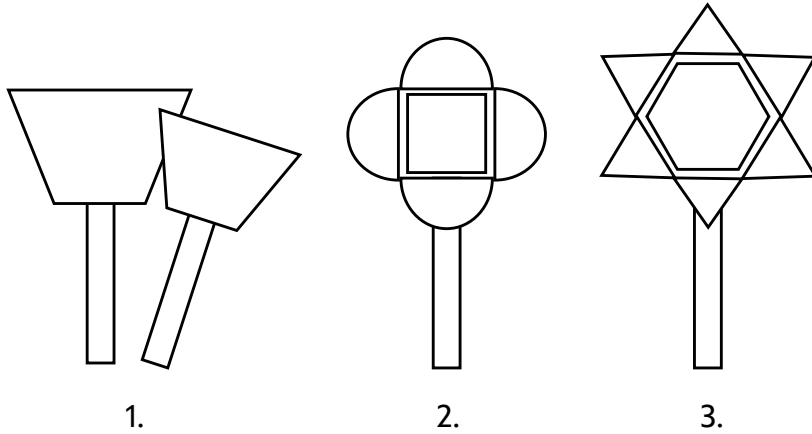
Answers: A. 1-2 dimes, 6 pennies; 2-5 dimes, 4 pennies; 3-4 dimes, 10 pennies; B. 1-7 cents, 2-13 cents







Shape It (K-2)

Power Goal: Create a new shape using two-dimensional shapes.

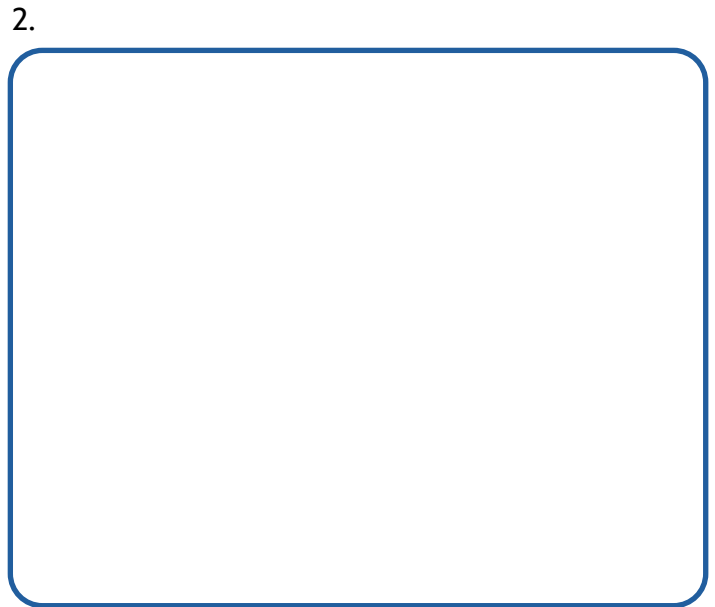
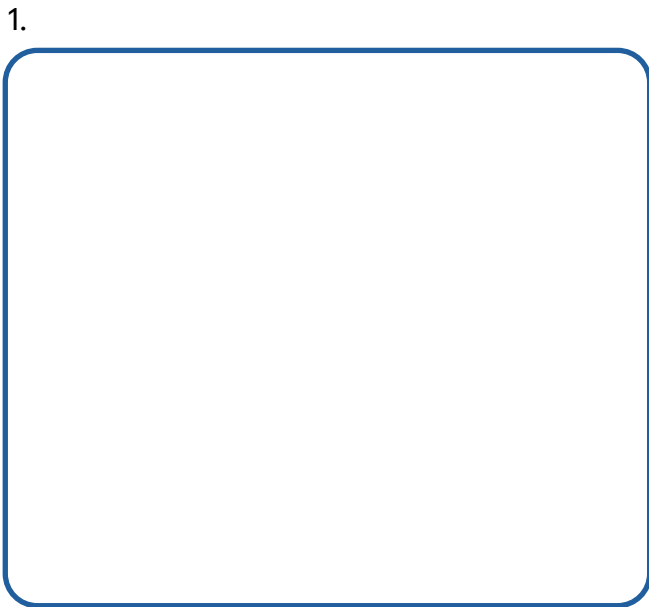
Learning Choices:

A. Color the shapes in the picture using the key.



shape		color
square		red
rectangle		green
half circle		blue
trapezoid		purple
triangle		orange
hexagon		yellow

B. Use the shapes below to draw your own composites.



Answers: A. 1-two purple trapezoids, two green rectangles; 2-one red square, four blue half circles, one green rectangle; 3-six orange triangles, one yellow hexagon, one green rectangle B. Answers will vary.



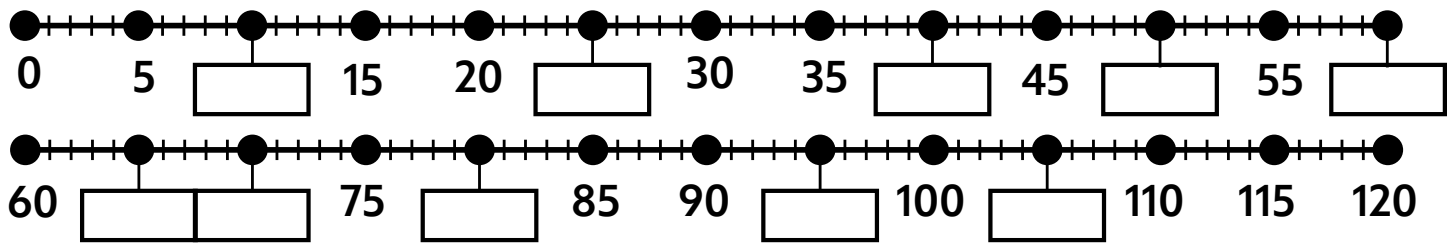
FROG HOP (K-2)

Power goal: Skip count by multiples of five.

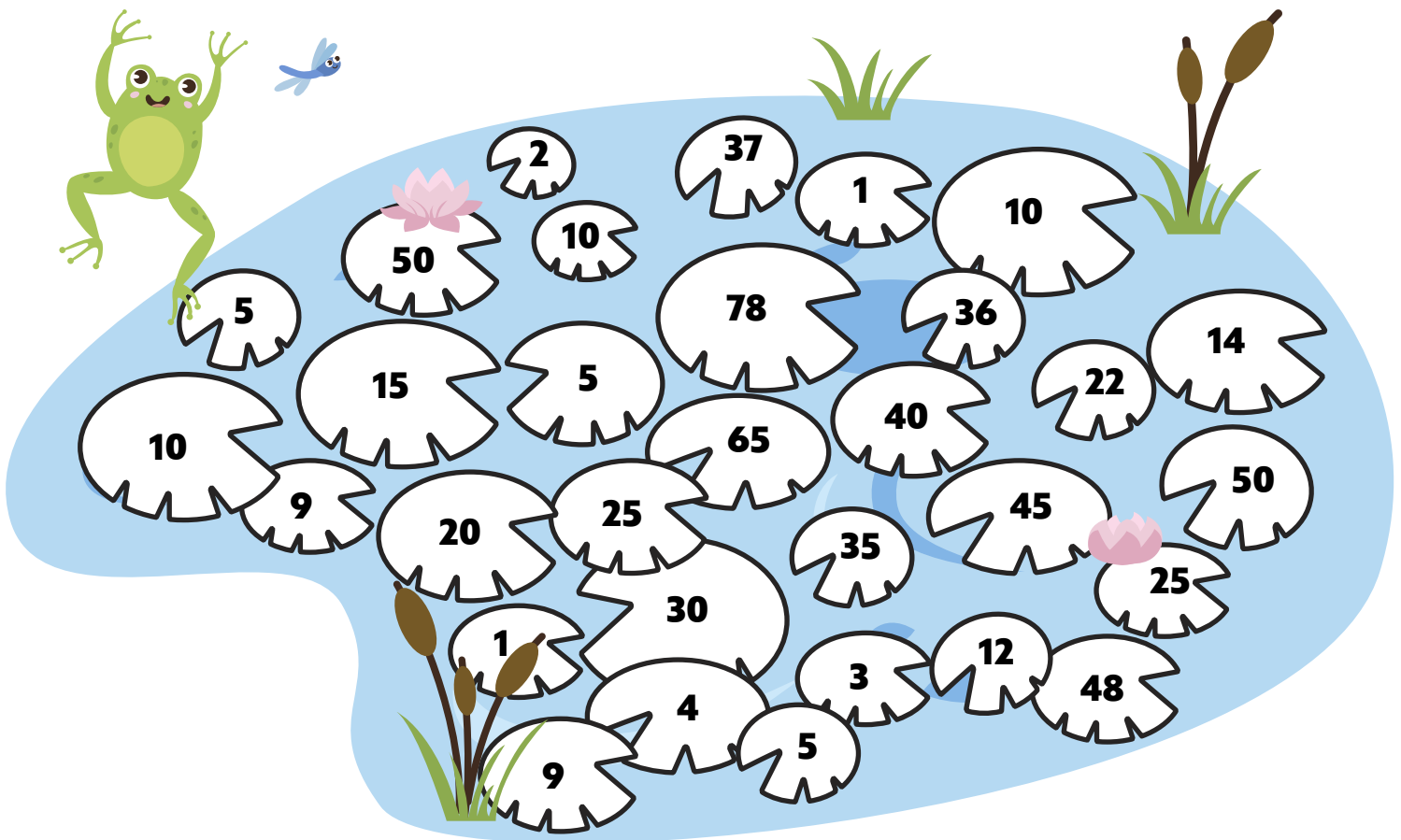
Learning choices:

A quicker way to count groups is by skip counting. The numbers we use when skip counting are also called multiples. Skip counting by multiples of 5 begins like this: 5, 10, 15. Then it keeps going.

A. Write the missing multiples in the boxes below to skip count by fives. The second line begins where the first line ends.



B. Use skip counting by multiples of 5 to help the frog find a path to the other side of the pond. Color the lily pads that he should use green.



Answers: A. 10, 25, 40, 50, 60, 65, 70, 80, 95, 105, 110; B. From left to right, the lily pads with 5, 10, 15, 20, 25, 30, 35, 40, 45, and 50 should be colored green.





Find the Area (K-2)


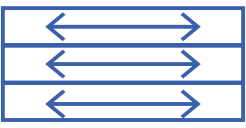
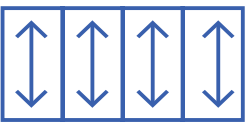
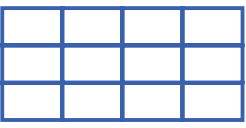
Power goal: Find the area of rectangles by using rows and columns to create equal-sized squares and then by counting the squares.

Learning choice:

Area is the amount of space covered by a flat surface. To find the area of a rectangle, you can divide the rectangle into smaller square units by creating rows and columns.

Rows are horizontal lines. 

Columns are vertical lines. 

rectangle	rectangle with 3 rows	rectangle with 4 columns	rectangle with 3 rows and 4 columns
			
1 rectangle	3 rectangles	4 rectangles	12 square units

1. Create squares in the rectangle below by making 2 rows and 4 columns.



How many squares did you create? _____ square units

2. Create squares in the rectangle below by making 3 rows and 5 columns.



How many squares did you create? _____ square units

3. Create squares in the rectangle below by making 4 rows and 5 columns.



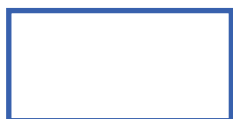
How many squares did you create? _____ square units

4. Create squares in the rectangle below by making 2 rows and 5 columns.



How many squares did you create? _____ square units

5. Create squares in the rectangle below by making 4 rows and 4 columns.



How many squares did you create? _____ square units



Answers: 1. 8; 2. 15; 3. 20; 4. 10; 5. 16

Place and Value (K-2)

Power Goal: Identify the value of digits in the hundreds, tens, and ones places in a three-digit number.

Learning Choices:

The position of a digit in a number determines its value. For example, 7 in 470 represents 7 tens or 70. Let's identify more values!

A. Look at the number 826 in the place value chart below. Notice where each digit goes in the chart.

hundreds	tens	ones
8	2	6

Write the correct digits in the boxes to complete this place value chart. Use the chart above for help.

number	hundreds	tens	ones
1. 789			
2. 367			
3. 834			
4. 951			

B. Look at the values of each place for the number 826 below. Notice that the digit 8 has a value of 800, the digit 2 has a value of 20 and the digit 6 has a value of 6.

value of hundreds	value of tens	value of ones
800	20	6

Write the correct values for each number in the chart below. Use the chart above for help.

number	value of hundreds	value of tens	value of ones
1. 789			
2. 367			
3. 834			
4. 951			



Reverse Math (K-2)

Power Goal: Solve addition and subtraction using inverse operations.

Learning Choices:

Inverse operations are opposite operations that reverse the effect of the other.

For example, the addition of $5 + 3 = 8$ can be reversed through subtraction ($8 - 5 = 3$ or $8 - 3 = 5$).

A. Write the correct number in the blank to make the inverse operations correct.

1. $7 + 2 = 9$

$9 - \quad = 7$

$9 - \quad = 2$

2. $3 + 2 =$

$5 - 3 = 2$

$5 - \quad = 3$

3. $6 + 4 =$

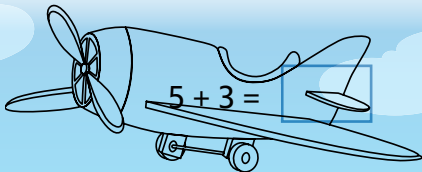
$10 - \quad = 6$

$10 - 6 = 4$

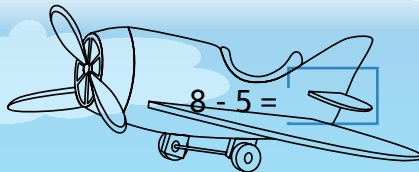
B. Each column below represents addition and subtraction problems using an inverse operation.

1. Answer the addition and subtraction problems.

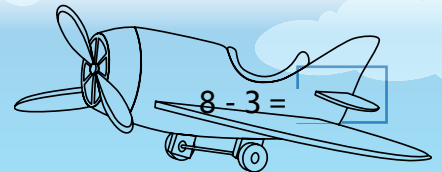
a.



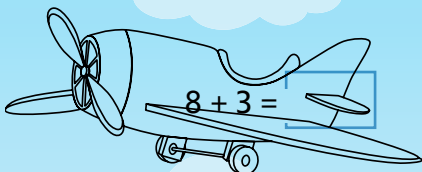
b.



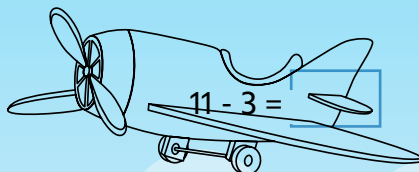
c.



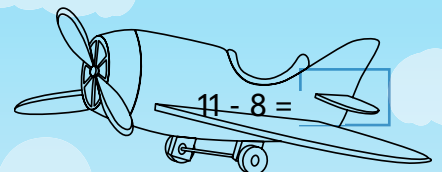
d.



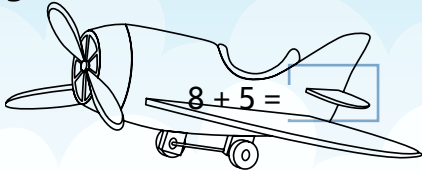
e.



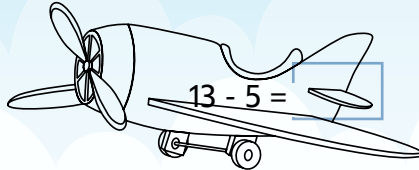
f.



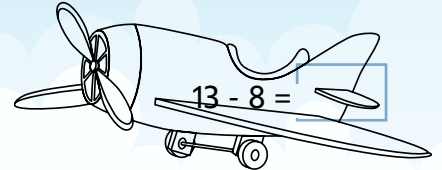
g.



h.



i.



2. Color each plane that equals 8 **blue**. Color each plane that equals 3 **green**. Color each plane that equals 5 **red**. Pick any color for the rest of the planes.

Answers: A. 1-2, 7; 2-5, 2; 3-10, 4; B. 1-a. 8, b. 3, c. 5, d. 11, e. 8, f. 3, g. 13, h. 8, i. 5; 2-Color a, e, and h blue. Color b and f green. Color c and i red. Color d and g any other color.



Making Change (3-5)

Power Goal: Add and subtract money and make the correct change when receiving more than the total price.

Learning Choices:

A. Write the answer to each addition or subtraction problem. Then draw a line to the correct amount of money.

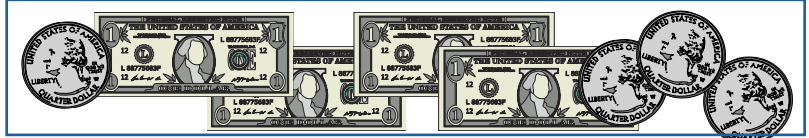
1. $\$2.00 + \$2.05 = \$4.05$

a.



2. $\$1.50 + \$3.75 = \$$ _____

b.



3. $\$7.50 - \$2.50 = \$$ _____

c.



4. $\$3.25 - \$1.70 = \$$ _____

d.



B. Use subtraction to find the correct change to return when someone pays too much. Always try to use the largest denomination of money possible. For example, if you have a five-dollar bill and buy something that costs \$3.54, you should receive \$1.46 in change. That would be 1 one-dollar bill, 1 quarter, 2 dimes, and 1 penny.

Directions: Write the correct amount on the line in the box below each problem. Then, draw or write the correct amount of change in the largest denominations of money possible.

1. Zoie went to the store and bought a pack of pencils. She gave the cashier \$5.00. The pencils cost \$2.49. How much change did the cashier give Zoie back?

\$ _____

2. Karson bought an ice cream cone for himself and one for his sister. He paid the cashier \$10.00. The total for both ice cream cones was \$8.62. How much change did Karson get back?

\$ _____



Answers: A. 1-\$4.05 to C; 2-\$5.25 to D; 3-\$5.00 to B; 4-\$1.55 to A; B. 1-\$2.51, two one-dollar bills, two quarters, and one penny; 2-\$1.38, one one-dollar bill, one quarter, one dime, and three pennies

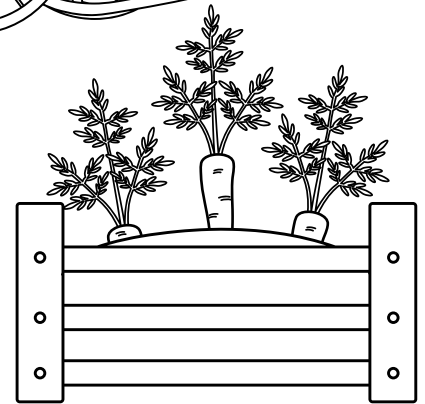
BUILD a GARDEN (3-5)

POWER GOAL: Use area and perimeter formulas to solve real world problems.

Learning Choices:

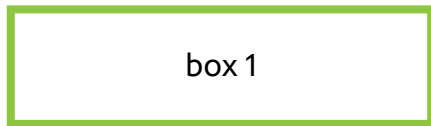
Help your teacher plant a garden for your school!

Your science teacher has decided to start a garden for your school. She wants to build two boxes for the garden. She needs to know the perimeter and area of each box to buy the right amount of wood and plants. The **perimeter** is found by adding all the lengths of the sides of the box. The **area** is found by multiplying the length and width of each box. The area always has the unit of measurement squared. For example, 6 ft. x 3 ft. = 18 ft. squared.



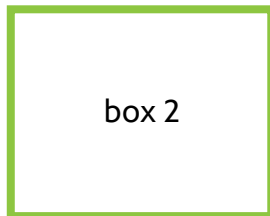
width = 7 ft

length = 2 ft



width = 5 ft

length = 4 ft



- A. Find the perimeter of each box by adding up the sides of each one. Then add the perimeters of each box together to find out how much wood your teacher should buy.
- Box 1: 2 ft. + 2 ft. + 7 ft. + 7 ft. = 18ft.
 - Box 2: _____ ft. + _____ ft. + _____ ft. + _____ ft. = _____ ft.
 - How much wood should your teacher buy? Hint: She will need enough to go around the perimeter of both boxes. _____ ft. + _____ ft. = _____ ft.
- B. Find the area of each box by multiplying the length by its width. Then add the areas of both boxes to find out how much space you have for planting.
- Box 1: 2 ft. x 7 ft. = 14 ft. squared
 - Box 2: _____ ft. x _____ ft. = _____ ft. squared
 - What is the total area available for planting?
_____ ft. squared + _____ ft. squared = _____ ft. squared

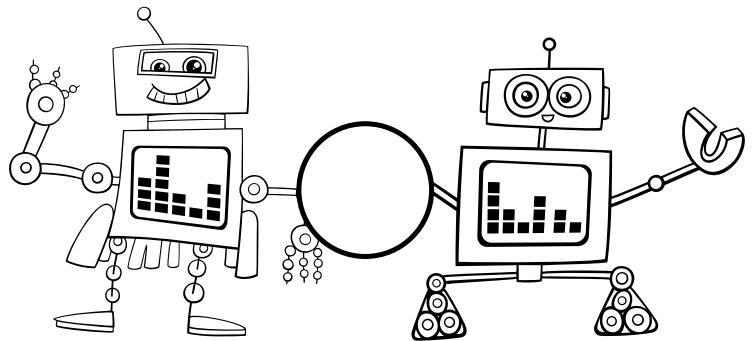


COMPARE THESE (3-5)

Power Goal: Compare two six-digit whole numbers using symbols ($>$, $=$, $<$) to record the results of comparisons.

Learning Choices:

Mathematicians use symbols to compare numbers. They use the symbol $>$ to show the number on the left is greater than the number on the right. They use the symbol $<$ to show the number on the left is less than the number on the right. When the numbers are equal, mathematicians use the symbol $=$. When comparing numbers with the same number of digits, start with the first digits in the number. If they are the same then compare the second digits, and so on moving left to right.



symbol	meaning	example
$>$	greater than	700,000 is greater than 620,000 \rightarrow 700,000 $>$ 620,000
$<$	less than	240,000 is less than 360,000 \rightarrow 240,000 $<$ 360,000
$=$	equal to	200,000 is equal to 200,000 \rightarrow 200,000 $=$ 200,000

Hint: It should make sense when you read it left to right.

- A. Circle the boxes with comparisons that use the symbols correctly. Put an "X" in the boxes with comparison symbols that are used incorrectly.

1. 780,000 = 600,000	2. 207,000 < 350,000	3. 128,000 < 122,000
4. 120,000 < 213,000	5. 490,000 < 490,000	6. 509,000 < 788,000
7. 800,000 > 790,099	8. 605,000 < 534,500	9. 899,000 = 899,000

- B. Write the correct symbol in the comparisons below. Circle the digit that shows how you got your answer. If the numbers are equal, do not circle anything. The first one has been done for you.

1. 780,000 $>$ 776,000

2. 500,000 _____ 509,000

3. 122,320 _____ 122,000

4. 490,000 _____ 490,000

5. 253,957 _____ 253,975



Answers: A. A circle should be drawn around boxes 2, 4, 6, 7, and 9. An X should be placed in 1, 3, 5, and 8. B. 1 - $<$, circle 8 in 780,000; 2 - $<$, circle 9 in 509,000; 3 - $<$, circle 3 in 122,320; 4 - $=$, no circle; 5 - $<$, circle 5 in 253,957

NUMBER FORMS (3-5)

POWER GOAL: Read and write whole numbers up to 1,000,000 in several forms.

Learning Choices:

word form	millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones
value	1,000,000	100,000	10,000	1,000	100	10	1



A. Circle the values that have a six in the ten thousands place.

1. 6,987

2. 768,345

3. 3,769,746

4. 2,785,690

5. 8,063,668

6. 8,654

B. Write a number that includes the given values. The first one is done for you.

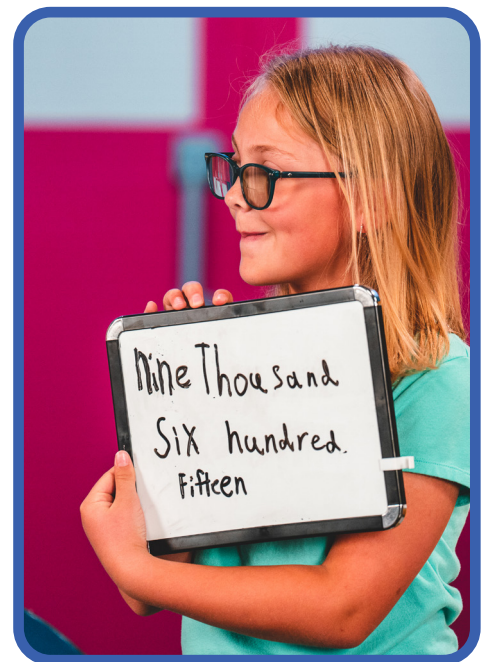
- four ten thousands → 45,678
- six tens → _____
- two hundreds → _____
- seven hundred thousands → _____

C. The expanded form of 925,763 can be written as

$$900,000 + 20,000 + 5,000 + 700 + 60 + 3$$

Write the expanded form for the following numbers:

- 543 = _____
- 67,890 = _____
- 745,981 = _____



Answers: A. Choices 2, 3, and 5 should be circled. B. 1-Answers will vary but should include a 4 in the ten thousands place. 2-Answers will vary but should include a 6 in the tens place. 3-Answers will vary but should include a 2 in the hundreds place. 4-Answers will vary but should include a 7 in the hundred thousands place. C. 1-500 + 40 + 3; 2-60,000 + 7,000 + 800 + 90; 3-700,000 + 40,000 + 5,000 + 900 + 80 + 1

NUMBER ROUNDUP (3-5)

Power goal: Round whole numbers to the nearest 10 and 100 place values.

Learning choices:

Rounding numbers can give you easier numbers to work with.

Follow these steps when rounding.

Step 1: Find the digit in the place value you will round to.

Step 2: Look at the digit in the place to the right.

Step 3: If the digit to the right is 4 or less, you keep the digit you are rounding the same. If the digit to the right is 5 or more you round the digit on the left up.

Step 4: Make the digits to the right zeros.

This poem may help you remember.

“Find your place.

Look next door.

Four or less, let it rest.

Five or more, let it soar.”

Example:

Round the number 4,057 to the nearest tens place.

Step 1: (Find your place.) The digit 5 is in the tens place. (This “5” will either stay the same or go up to 6.)

Step 2: (Look next door.) The digit to the right is 7. (This digit will help decide if the 5 stays or goes up.)

Step 3: (Five or more, let it soar.) The digit 7 is greater than 5, so round the digit to the left (5) up to 6.

Step 4: Make the digits to the right zeros.

number: 4,057

number rounded to the nearest ten: 4,060

Let's practice this below!

A. Round the following numbers to the nearest tens place.

1. 6,253 → _____

2. 8,289 → _____

3. 9,233 → _____

4. 2,365 → _____

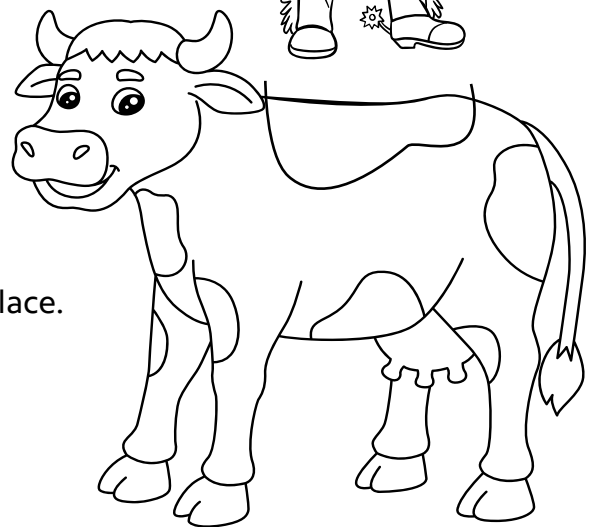
B. Round the following numbers to the nearest hundreds place.

1. 6,253 → _____

2. 8,289 → _____

3. 9,233 → _____

4. 2,365 → _____



Answers: A. 1-6,250; 2-8,290; 3-9,230; 4-2,370; B. 1-6,300; 2-8,300; 3-9,200; 4-2,400

Break it Down (3-5)

Power Goal: Decompose fractions, including fractions greater than one and mixed numbers, into unit fractions using concrete models, drawings, and/or a number line.

Learning Choices:

One way to understand fractions is to break them down using drawings.

The mixed number $3\frac{2}{4}$ can be **decomposed**, or broken down, into whole and fractional units.

In this mixed number, 3 represents 3 whole units. The fraction $\frac{2}{4}$ represents part of another whole unit. The denominator, which is 4, tells us how many equal parts the whole is divided into. The numerator, which is 2, tells us how many of those equal parts are represented.

See the tape diagram below as an example.



A. Shade in the correct number of parts in the tape diagram below to represent the fraction given.

1. $\frac{7}{8}$

2. $2\frac{2}{3}$

3. $4\frac{1}{2}$

B. Create your own tape diagrams to decompose or break down the fractions provided below.

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

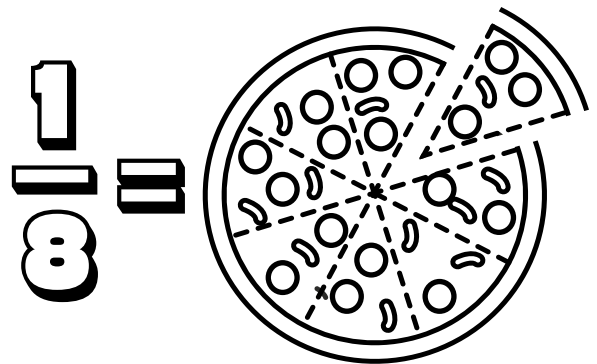
2. $3\frac{7}{10}$

Step 1: Look at the denominator.

Step 2: Draw a tape diagram to represent your fraction. In the diagram, each whole number should be represented by a rectangle. Draw one extra rectangle for the fraction. Then divide each rectangle into the number of equal parts indicated by the fraction's denominator.

Step 3: Shade in the number of full rectangles that match the whole number.

Step 4: In the last rectangle, shade in the number of parts that match the numerator.



Answers: A. 1-Shade in two full rectangles and two parts of the third. 3-Shade in four full rectangles and one part of the fifth. B. 1-Draw two rectangles divided into five equal parts. Shade in one full rectangle and three parts of the second. 2-Draw four rectangles divided into ten equal parts. Shade in three full rectangles and seven parts of the fourth.

Family Power Hour

Family Night

Get your family together for a fun family night! Not only does it encourage bonding time, but it also gives you a chance to show off academic skills like math and reading. This will help you be more confident! So, get creative! Do one or try them all! The best part is that it is all wrapped up in fun for everyone!

Cook up some memories!



Cooking with your family has many rewards! Pull out some old family recipes or find new ones you can all cook together. Then you can use that time in the kitchen to catch up and focus on each other. Cooking requires you to show off skills like measuring, counting, temperature reading, and safety procedures. It is also a great chance to use your senses of smell and taste to test your recipes. Mmm...

Read all about it!

Make story time a part of your family's fun night! Take turns reading by having everyone choose a book to read. Remember to ask questions about the stories as you go! Change things up by having family members act out what they read or hear. Take it outside when the weather is nice and find a comfy spot. Challenge one another to create new endings or sequels to your favorite stories and turn it into a game. Make reading one of your family's favorite activities!



Tell me more!

Use a family night to interview family members! Record the interview so you can all watch or read it again. Use a cell phone or camera or even write down their answers on paper and begin a book! Let your family in on the fun by taking turns asking each other questions! You could write questions on index cards or pieces of paper and take turns drawing questions to answer. Here are some starters, but you can add as many to your list as you want!

- What was your favorite toy?
- What was your favorite game to play?
- What was your favorite summer activity?
- What was your favorite food?
- Tell me about the time you learned to ride a bike, swim, cook, etc.
- Tell me about any pets you had when you were young.
- Who was your favorite teacher?



Hey, parents! If you post any pictures while you and your family are spending time together, tag us!
#ARFamilyPowerHour #RiseandShineAR

 @Arkansas_PBS  @ArkansasPBS

HELPing ALL Learners

While you are working with children to boost their learning, consider these tips and tools to help all learners.

Skill	Strategy/Resource	Description
Communication	Helping	With your help or guidance, allow children to help with chores and everyday tasks, including things such as talking with salespeople or checking out at a store.
Writing	Chunking Writing Tasks	Instead of asking children to write an entire piece, divide it into smaller parts.
Writing	Talk It Out	If a child needs help with writing, allow them to talk through their answers in other subject areas such as math or science instead of having them write their answers.
Reading	Chunking Text	Break long texts into shorter sections. Have children read or listen to one section at a time, pausing to discuss or write about each one before reading the next.
Reading	Build Background Knowledge Prior to Reading	Before having a child read a text or story, consider what vocabulary words or ideas they might be unfamiliar with and explore those together, first.
Reading in Math	Read Aloud	For children who need help with reading, reading math problems to them will help them focus on the problem without struggling to understand it.
Math	Manipulatives	Children can work through a math problem by moving around small household objects such as building blocks, pencils, coins, rocks, beans, cereal, etc.
All	Different Ways of Knowing	Encourage learning activities involving multiple senses and types of intelligences, such as:



- Nature Spotlight: Take a walk and write down what you see, smell, hear, and sense through touch.
- Body Movement Spotlight: Create a dance or athletic routine.
- Word Spotlight: Create a poem or a set of jokes using the power words.
- People Spotlight: Get with family members or friends and play or make a game, complete a puzzle, or put on a performance.
- Self Spotlight: Express your feelings by building or creating something, drawing, or writing a journal entry.
- Number Spotlight: Using an everyday object, measure different things in/around your home (example: the chair is 12 forks tall).
- Musical Spotlight: Read books to the tune of different genres of music.
- Visual/Creative Spotlight: Draw or sketch something you learned.
- Technology Spotlight: Create a presentation/game to show your learning.

For our full list of tips, including links to online resources, visit myarpbs.org/helpinglearners.

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