

Grade

2



ARAL

PROGRAM

MATHEMATICS

Learner's Workbook

ARAL – Math Grade 2

Learner’s Workbook

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GRADE 2 - MATH

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ARAL Summer Grade 2 Math

Session 1

Giving the Place Value of a Three-Digit Number

Practice Activity

Direction: Color the box representing the place value of the underlined number.

5<u>1</u>4		
Hundreds	Tens	Ones

13<u>2</u>		
Hundreds	Tens	Ones

2<u>6</u>8		
Hundreds	Tens	Ones

57<u>5</u>		
Hundreds	Tens	Ones

4<u>2</u>9		
Hundreds	Tens	Ones





Independent Activity

Directions: Read the number and write each digit on the correct blank space.

175 _____ Hundreds _____ Tens _____ Ones	953 _____ Hundreds _____ Tens _____ Ones
417 _____ Hundreds _____ Tens _____ Ones	539 _____ Hundreds _____ Tens _____ Ones
971 _____ Hundreds _____ Tens _____ Ones	





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Session 2

Reading Numbers up to 1000 in Symbols and in Words

Practice Activity

Direction: Read the following numbers.

1. six hundred nineteen
2. eight hundred forty- one
3. nine hundred ninety-nine
4. seven hundred thirty
5. nine hundred eighty- five

Independent Activity

Direction: Make your own 3-digit numbers more than 100 and write these in words.

1. _____
2. _____
3. _____
4. _____
5. _____





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Session 3

Visualizing and Writing Three-Digit Numbers in Expanded Form

Practice Activity

Direction: Write in standard form.

1. $600 + 60 + 2 =$ _____

2. $400 + 60 + 5 =$ _____

3. $900 + 40 + 8 =$ _____

4. $800 + 90 + 9 =$ _____

5. $700 + 30 + 1 =$ _____

Independent Activity

Direction: Write the expanded form of each number.

1. 489 = _____

2. 328 = _____

3. 607 = _____

4. 394 = _____

5. 829 = _____





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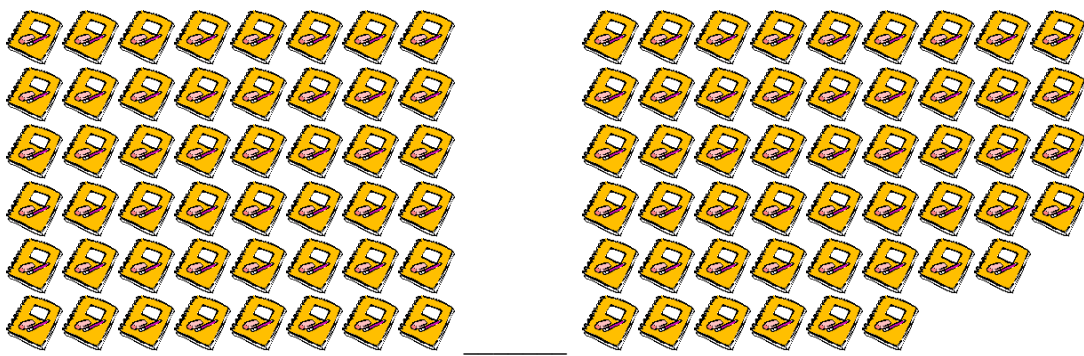
Session 4

Ordering Numbers Up to 1,000 in Increasing or Decreasing Order

Practice Activity

Direction: Use the correct comparison symbols ($>$, $<$, $=$) to compare the following.

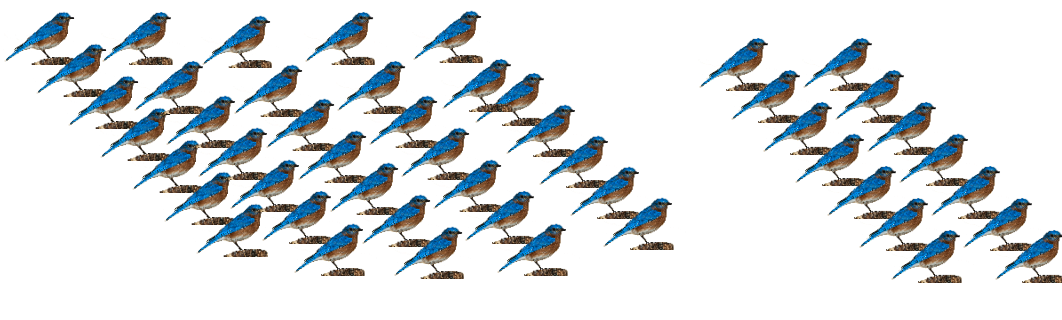
1. Mangoes



2. Pencils

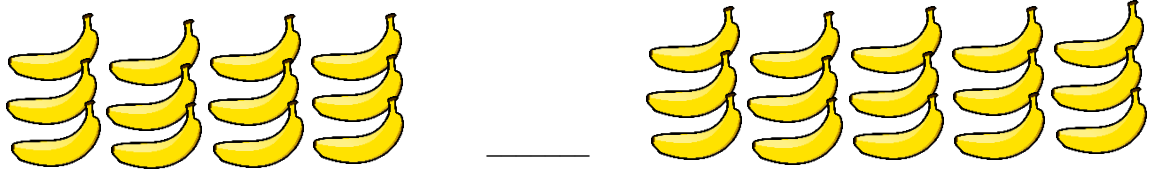


3. Birds

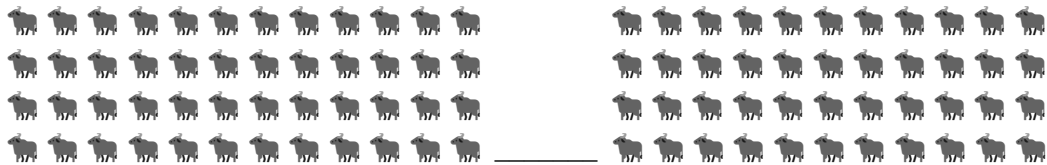




4. Bananas



5. Carabaos



Independent Activity

Direction: Compare the following numbers using the correct relational symbols ($>$, $<$, $=$).

1. 209 ____ 390

2. 445 ____ 595

3. 805 ____ 658

4. 710 ____ 710

5. 964 ____ 150





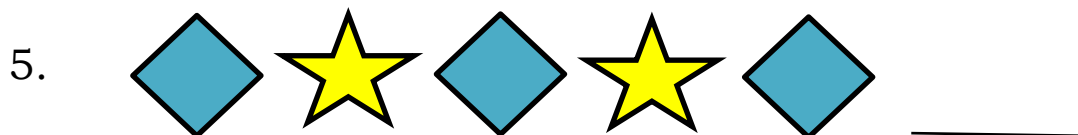
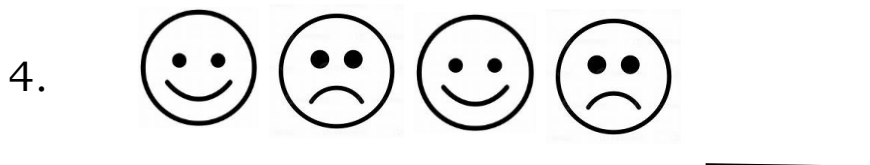
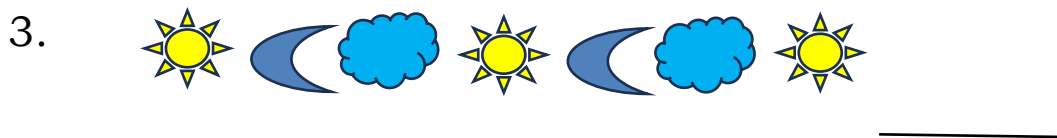
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Session 5

Pattern Using Two Attributes

Practice Activity

Direction: Draw and color the next item in the pattern.





Independent Activity

Direction: Write or draw the missing item in the pattern.

1. 1 2 3 ____ 5 6 7

2. A B C D ____ F G H

3. 1A 2B 3C 4D ____ 6F 7G

4.         _____

5.         _____





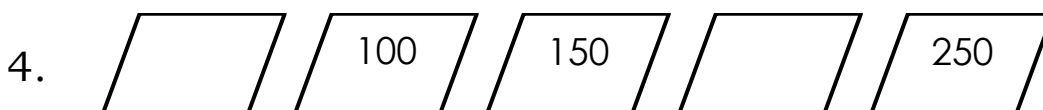
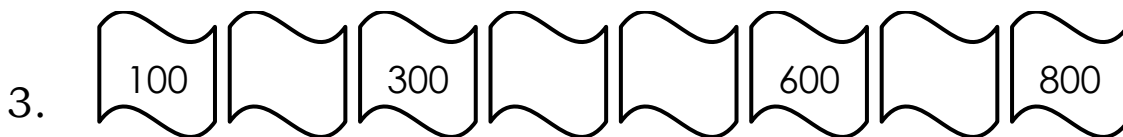
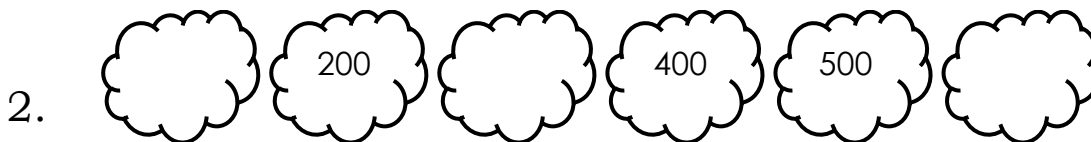
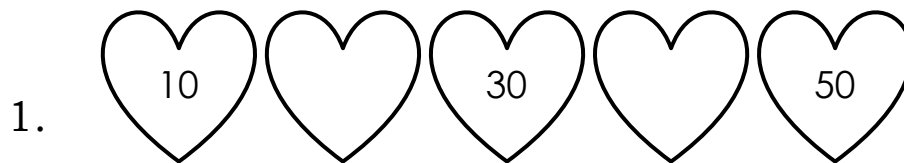
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Session 6

Counting and Number Patterns: Visualizing and Counting Numbers by 10s, 50s, 100s

Independent Activity

Directions: Fill in the missing numbers.





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Session 7

Numbers with Sums up to 1,000 without and with Regrouping: 2-digit and 3-digit numbers

Practice Activity

Directions: Add the following numbers using regrouping.

1. Hero has 527 pencils and 37 ball pens. How many pencils and ball pens does Hero have in all?

$$\begin{array}{r} 2. \quad 743 \\ + \quad 28 \\ \hline \end{array}$$

3. What is the sum of 574 and 52?

$$\begin{array}{r} 4. \quad 684 \\ + \quad 39 \\ \hline \end{array}$$

5. What is the sum of 849 and 73?





Independent Activity

Directions: Add the following numbers.

$$\begin{array}{r} 1. \quad 246 \\ + 47 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 624 \\ + 57 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 539 \\ + 83 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 793 \\ + 49 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 388 \\ + 99 \\ \hline \end{array}$$





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Session 8

Addition of Whole Numbers Including Money with Sums up to 1,000 Using Appropriate Problem-Solving Strategies and Tools

Independent Activity

Directions: Analyze the problem and write the correct answer.

1. Nanay Malou's birthday gifts to Rona are a notebook and colored pencils. The notebook costs ₱178.00, while the colored pencils cost ₱10.00 more than the notebook. How much is the total amount of Nanay Malou's gift?

2. A chocolate costs ₱230.00 and two biscuits cost ₱48.00. Find the total cost of the chocolate and the two biscuits.





3. Amy saved ₱560.00 and her sister saved ₱240.00. If they put together their money, how much money do they have in all?

4. Simon saved ₱30.00 every day from his daily allowance. How much did he save for 5 days?

5. Jake asked permission to go to school. His mother gave him ₱50.00, his father gave him ₱30.00, and his brother gave him ₱100.00. How much money did Jake have on that day?





ARAL Summer Grade 2 Math

Session 9

Addition of Whole Numbers Including Money with Sums Up to 1,000 Using Appropriate Problem-Solving Strategies and Tools

Practice Activity

Directions: Solve the following problems.

1. Naty wants to buy three books from the bookstore. How much money does he need if the prices of the books are listed as follows:

Book A: P250.00

Book B: P350.00

Book C: P460.00

2. During a garage sale, Maylene bought the following items:

T-Shirt: P70.00

Jeans: P150.00

Shoes: P200.00

How much did it cost her to buy all three items?

3. Yani bought her three favorite fruits: apples that cost P60.00, oranges that cost P70.00, and mangoes that cost P100.00. How much did she pay in all?

4. You want to have biscuits and chocolate milk for snacks. A pack of biscuits costs P100.00, and the





chocolate milk costs P150.00. How much are you going to pay for the biscuits and chocolate milk?

5. In your wallet, you find three one-hundred-peso bills, one fifty-peso bill, five twenty-peso bills, and two ten-peso coins. How much money do you have in total?

Independent Activity

Directions: Analyze each problem and solve.

1. In the field, I saw a purse containing five one-hundred-peso bills and four ten-peso coins. How much money did the purse contain?
2. Every birthday, I put bills and coins in a jar. Now, it has seven one-hundred-peso bills and four ten-peso coins. How much money did I save in all?
3. The total voluntary collection of Iguig Central Elementary School is P600.00, while that of Baculud Elementary School is P240.00. What is the total voluntary collection of the two schools?
4. Harold has P780 and Jane has P130. How much money do they have together?
5. Revin and Sophia have a piggy bank. Revin saved P300 while Sophia saved P250. How much did Sofia and Revin save in all?





ARAL Summer Grade 2 Math

Session 10

Digit Numbers with Minuends Up to 999 without and with Regrouping

Practice Activity

Direction: Subtract 2- to 3-digit numbers with minuends up to 999 without regrouping.

$$\begin{array}{r} 184 \\ - 99 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 553 \\ - 494 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 460 \\ - 375 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 421 \\ - 42 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 950 \\ - 177 \\ \hline \\ \hline \end{array}$$

Independent Activity

Direction: Subtract 2- to 3-digit numbers with minuends up to 999 with regrouping.

$$\begin{array}{r} 421 \\ - 42 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 553 \\ - 494 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 950 \\ - 177 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 460 \\ - 375 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 184 \\ - 99 \\ \hline \\ \hline \end{array}$$





ARAL Summer Grade 2 Math

Session 11

Solving Problems Involving Subtraction of Whole Numbers, Including Money, with Minuends up to 1000 Using Appropriate Problem-Solving Strategies and Tools

Practice Activity

Directions: Solve each of the following problems.

1. You have ₱1000 to spend on a new bicycle. After purchasing it for ₱850, how much money will you have left to buy accessories?
2. Max has ₱900, and Nina has ₱765. How much more money does Max have than Nina?
3. A basketball team scored 567 points in one season. In the next season, they scored 433 points. By how many points did their score decrease?
4. Carla saved ₱30 from her ₱100 weekly allowance. How much did she spend?
5. Lisa had 820 marbles, and she gave 305 marbles to her friend. How many marbles did she have left?





Independent Activity

Directions: Solve the following problems.

1. Alex had ₱1000. He spent ₱625 on a new toy car. How much money did he have left?
2. There were 768 apples in a box. After 456 apples were sold, how many apples were left?
3. John had ₱950. He bought a book for ₱325. How much money did he have left?
4. A jacket originally cost ₱600, but there was a ₱120 discount. What was the final price?
5. Ana has ₱850, and Ben has ₱679. How much more money does Ana have than Ben?





ARAL Summer Grade 2 Math

Session 12

Multiplication as repeated addition, array, counting by multiples, and equal jumps on the number line

Practice Activity

Directions: Use the set of pictures below to show multiplication as repeated addition.

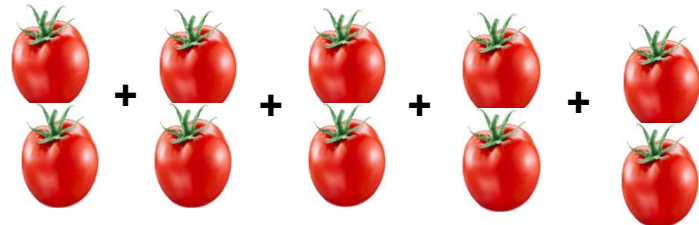
1. $2 \times 4 =$



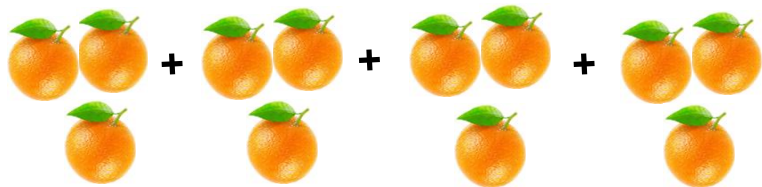
2. $3 \times 5 =$



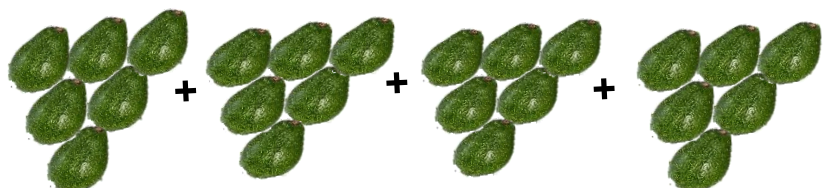
3. $5 \times 2 =$



4. $4 \times 3 =$



5. $4 \times 6 =$





Independent Activity

Directions: Write the following repeated addition into a multiplication sentence.

$$1. 5 + 5 + 5 \quad \underline{\hspace{2cm}} \quad = \underline{\hspace{2cm}}$$

$$2. 8 + 8 \quad \underline{\hspace{2cm}} \quad = \underline{\hspace{2cm}}$$

$$3. 1+1+1+1+1+1+1+1+1 \quad \underline{\hspace{2cm}} \quad = \underline{\hspace{2cm}}$$

$$4. 3 + 3 + 3 + 3 + 3 + 3 \quad \underline{\hspace{2cm}} \quad = \underline{\hspace{2cm}}$$

$$5. 4 + 4 + 4 + 4 + 4 + 4 + 4 \quad \underline{\hspace{2cm}} \quad = \underline{\hspace{2cm}}$$





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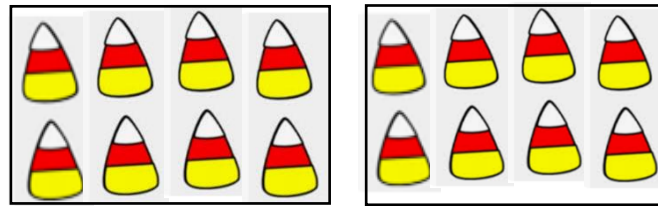
Session 13

Multiplication as repeated addition, array, counting by multiples, and equal jumps on the number line

Practice Activity

Directions: Write the correct answer to complete the multiplication sentence.

1. $2 \times 8 =$ _____



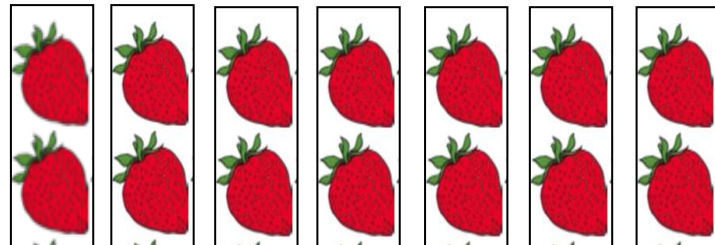
2. $4 \times 3 =$ _____



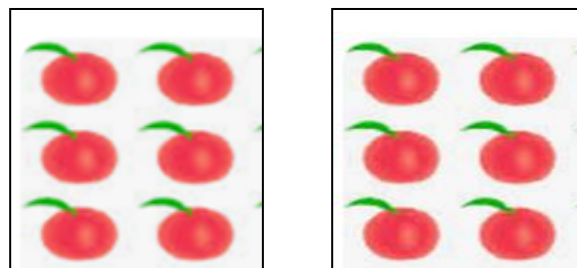
3. $5 \times 2 =$ _____



4. $7 \times 2 =$ _____



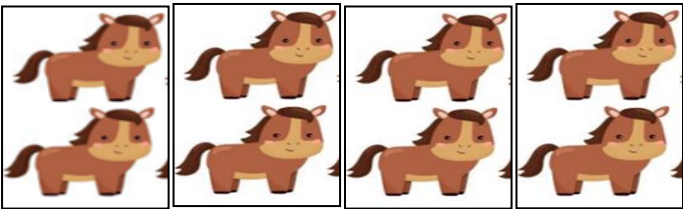
5. $2 \times 6 =$ _____



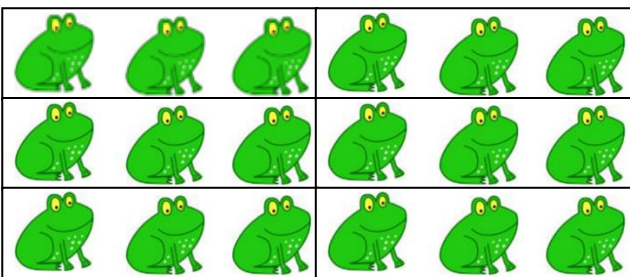


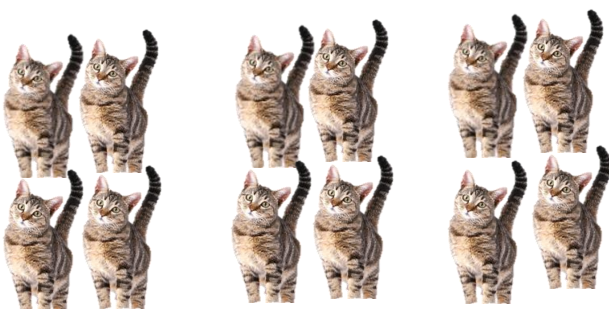
Independent Activity

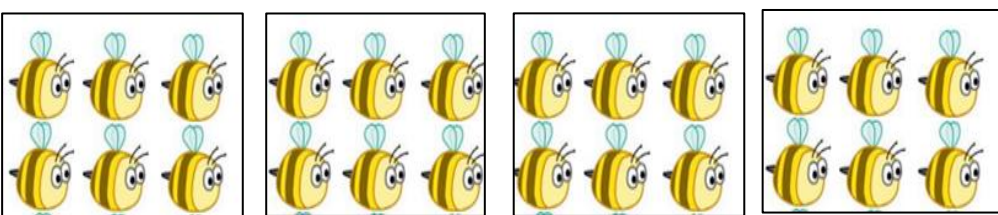
Directions: Write the missing number to complete the multiplication sentence.

1.  $4 \times \underline{\quad} = \underline{\quad}$

2.  $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

3.  $\underline{\quad} \times \underline{\quad} = 18$

4.  $\underline{\quad} \times 4 = \underline{\quad}$

5.  $\underline{\quad} \times 6 = \underline{\quad}$





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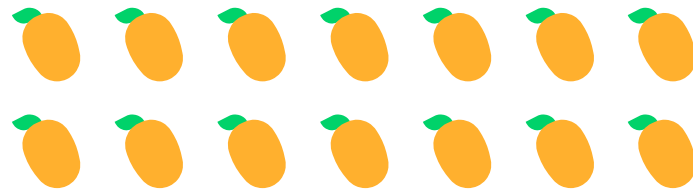
Session 14

Visualizing Division as Equal Sharing

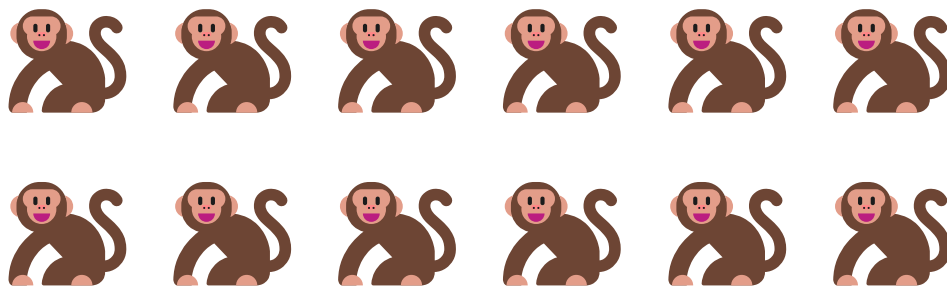
Practice Activity

Directions: Using the sets below, group the objects and draw a circle around each group to show how many objects are in each group.

1. Group the mangoes into 2.



Set 2: Group the monkeys into 3.

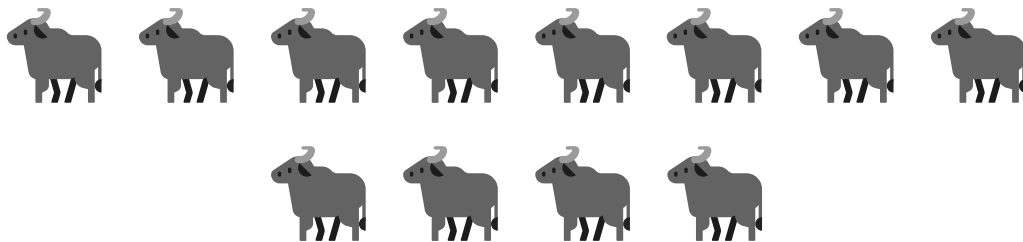


Set 3: Group the bananas into 5.

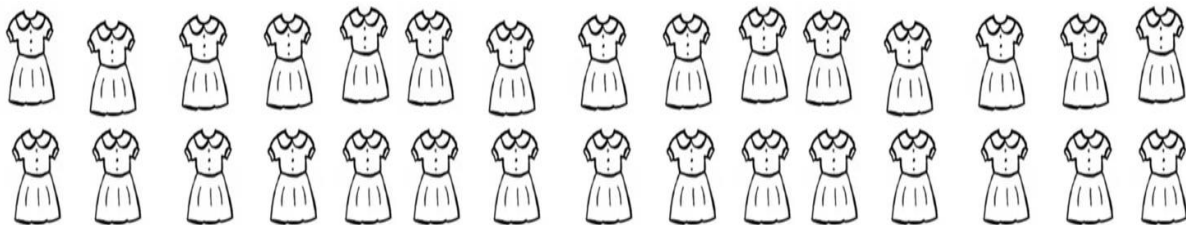




Set 4: Group the Carabaos into 3.



Set 5: Group the dresses into 10.





Independent Activity

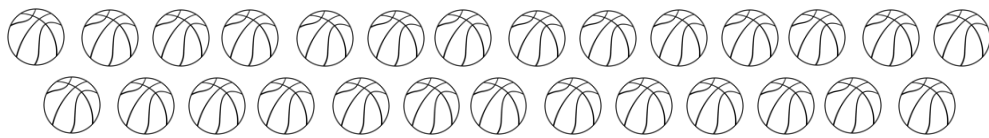
Directions: Read and understand the questions below.
Circle the letter that shows your answer.

1. How many hearts are in each group if you group 24 hearts into 4 groups?



- a. 5 b. 6 c. 7 d. 8

2. If you group 27 balls into 3 groups, how many balls will be in each group?



- a. 7 b. 8 c. 9 d. 10

3. Group the bananas into 5 groups. How many bananas will be in each group?

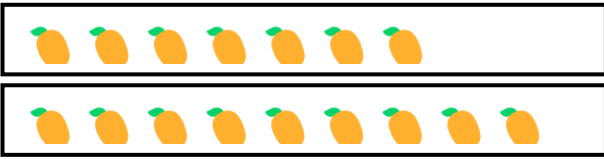


- a. 3 b. 4 c. 5 d. 6

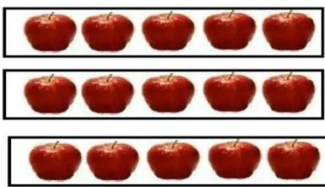
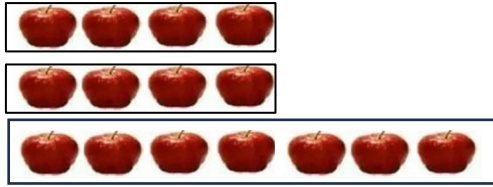
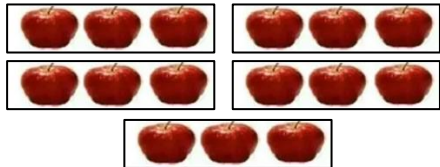
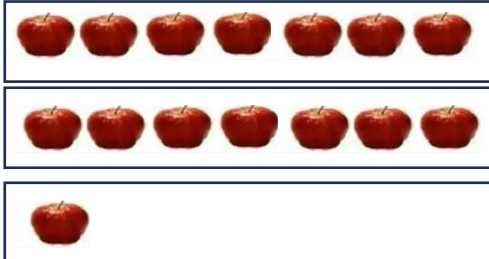




4. Which of these sets shows that 20 mangoes were equally divided into 2 groups?

- a. 
- b. 
- c. 
- d. 

5. Which of these sets shows that 15 apples were equally divided into 3 groups?

- a. 
- b. 
- c. 
- d. 





ARAL Summer Grade 2 Math

Session 15

Visualizing Division as Repeated Subtraction

Practice Activity

Direction: Solve the given problem by showing its repeated subtraction.

1. Divide 8 water bottles among 2 teams of athletes.

$$\begin{array}{r} 8 - 2 = \underline{\quad} \\ \underline{\quad} - 2 = \underline{\quad} \\ \underline{\quad} - 2 = \underline{\quad} \\ \underline{\quad} - 2 = \underline{\quad} \end{array}$$

2. Divide 16 eggs into 4 trays.

$$\begin{array}{r} 16 - 4 = \underline{\quad} \\ \underline{\quad} - 4 = \underline{\quad} \\ \underline{\quad} - 4 = \underline{\quad} \\ \underline{\quad} - 4 = \underline{\quad} \end{array}$$

3. Divide 25 apples into 5 baskets.

$$\begin{array}{r} 25 - 5 = \underline{\quad} \\ \underline{\quad} - 5 = \underline{\quad} \\ \underline{\quad} - 5 = \underline{\quad} \\ \underline{\quad} - 5 = \underline{\quad} \\ \underline{\quad} - 5 = \underline{\quad} \end{array}$$





4. Distribute 32 popsicle sticks into 8 groups.

$$32 - 8 = \underline{\quad}$$

$$\underline{\quad} - 8 = \underline{\quad}$$

$$\underline{\quad} - 8 = \underline{\quad}$$

$$\underline{\quad} - 8 = \underline{\quad}$$

5. Divide the 40 chairs into 10 classrooms.

$$40 - 10 = \underline{\quad}$$

$$\underline{\quad} - 10 = \underline{\quad}$$

$$\underline{\quad} - 10 = \underline{\quad}$$

$$\underline{\quad} - 10 = \underline{\quad}$$

Independent Activity

Direction: Solve the following problem by showing its repeated subtraction.

Situation	Repeated Subtraction
Example: The 9 breads are divide by 3 siblings.	$9 - 3 = 6$ $6 - 3 = 3$ $3 - 3 = 0$
1. The 6 pillows are divided by 2 visitors.	





2. Amy cooks 18 eggs for her 3 nieces.	
3. The 20 cookies are divided by 4 Ana's friends.	
4. Maria buys 24 hair clips and shares it to her 6 friends equally.	
5. The 30 fishes is divided by 5 fishermen.	





ARAL Summer Grade 2 Math

Session 16

Visualizing Division by Forming Equal Groups of Objects

Practice Activity

Directions: Using the sets below, divide the objects into equal groups by drawing a circle around each group. In the space provided. Write the number of equal groups you made.

1. $21 \div 3 = \underline{\quad}$



2. $28 \div 4 = \underline{\quad}$



3. $22 \div 11 = \underline{\quad}$

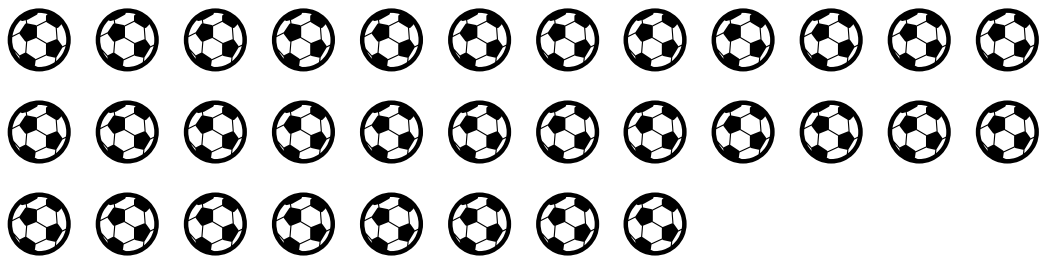


4. $36 \div 6 = \underline{\quad}$



5. $32 \div 8 = \underline{\quad}$





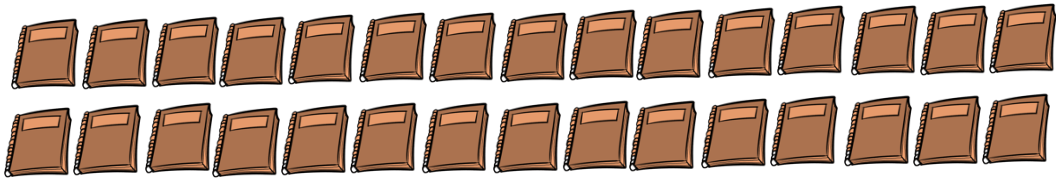
Independent Activity

Directions: Divide the following objects into equal groups by drawing a circle around each group. In the space provided, write the number of equal groups you made.

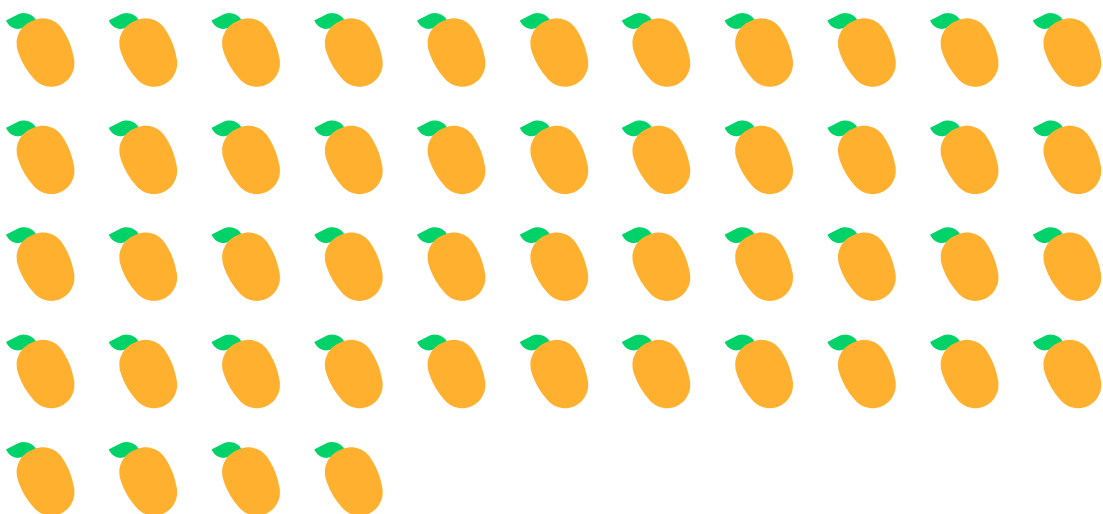
1. $18 \div 2 = \underline{\hspace{2cm}}$



2. $30 \div 3 = \underline{\hspace{2cm}}$

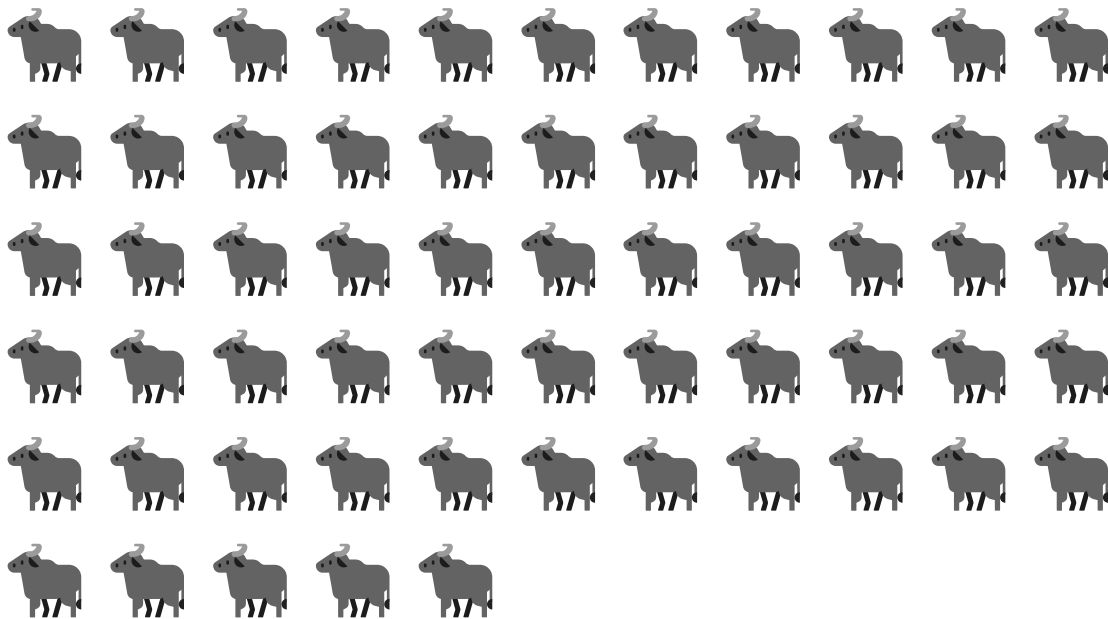


3. $48 \div 8 = \underline{\hspace{2cm}}$

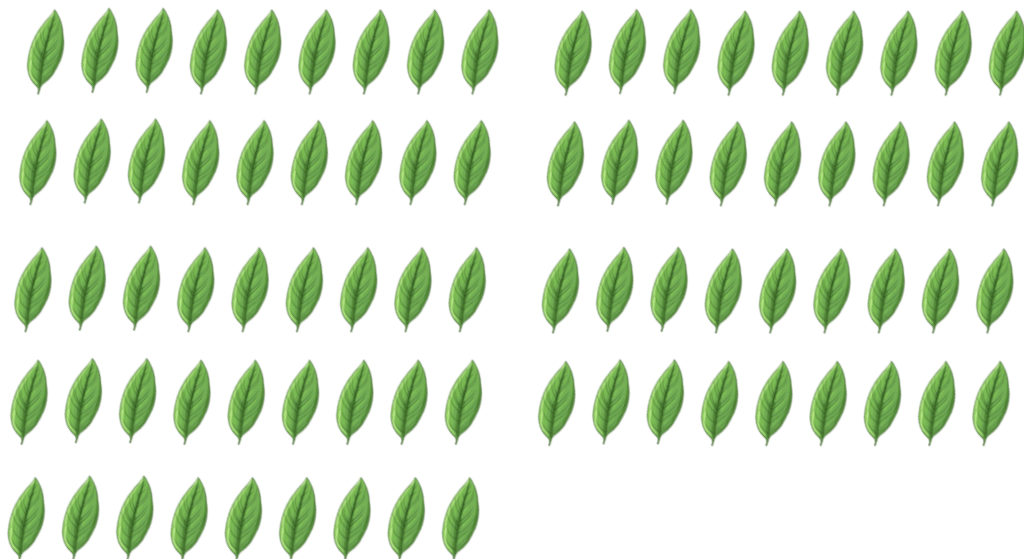




$$4. 60 \mid 5 = \underline{\hspace{2cm}}$$



$$5. 81 \mid 9 = \underline{\hspace{2cm}}$$





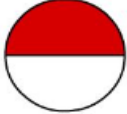
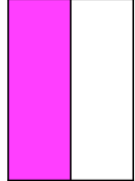
ARAL Summer Grade 2 Math

Session 17

Half circles and quarter circles

Practice Activity

Directions: Circle the correct fractions.

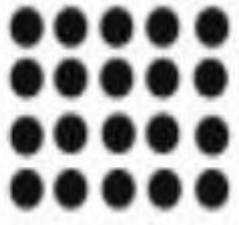
1.  $\frac{2}{3}$ $\frac{1}{3}$ $\frac{1}{2}$	2.  $\frac{1}{3}$ $\frac{3}{4}$ $\frac{1}{2}$	3.  $\frac{2}{3}$ $\frac{1}{3}$ $\frac{1}{2}$
4.  $\frac{2}{4}$ $\frac{3}{5}$ $\frac{1}{4}$ 5.  $\frac{2}{4}$ $\frac{3}{5}$ $\frac{1}{4}$		

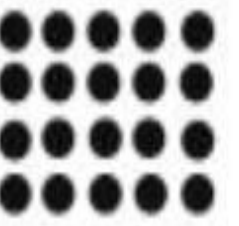




Independent Activity

Direction: Use the dots to find the fractions of the groups.

		
1. $\frac{1}{2}$ of 12 = ____	2. $\frac{1}{2}$ of 16 = ____	3. $\frac{1}{2}$ of 20 = ____

		
4. $\frac{1}{4}$ of 12 = ____	5. $\frac{1}{4}$ of 16 = ____	6. $\frac{1}{4}$ of 20 = ____





ARAL Summer Grade 2 Math

Session 18

Square, rectangle, triangle, and circle in 2- and 3-Dimensional Objects

Practice Activity

Directions: Identify the shapes.

1. Put a check mark on the square shaped object.



2. Put a check mark on the circle shaped object.



3. Put a check mark on the rectangle shaped object.

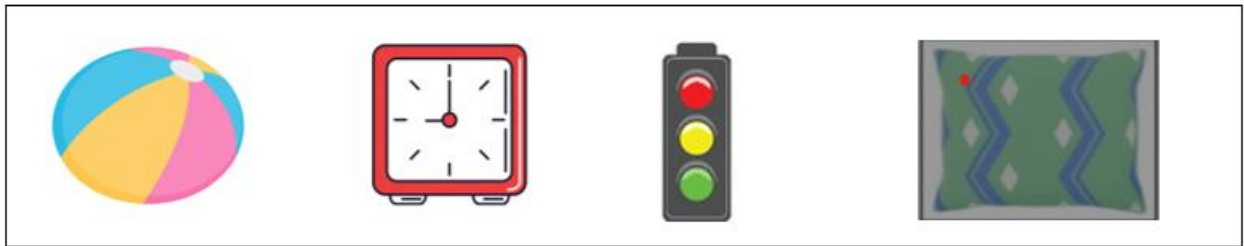


4. Put a check mark on the squared shaped object.



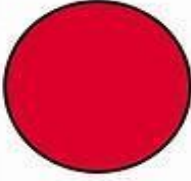


5. Put a check mark on the circle shaped object.



Independent Activity

Directions: Circle the number of sides each shape below has.

1. Rectangle 	1	2	3	4
2. Triangle 	4	3	2	1
3. Circle 	0	3	2	1
4. Square 	4	3	2	1





ARAL Summer Grade 2 Math

Session 19

Square, rectangle, triangle, and circle in 2- and 3-Dimensional Objects

Practice Activity

Direction: Identify the shapes. Encircle the letter of the correct answer.

1. Which 3D shape has a triangle as a face?



2. Which 3D shape has a rectangle as a face?



3. Which 2D shape is the face of a cube?



4. Which 2D shape is the face of a cone?



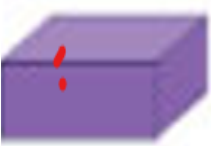
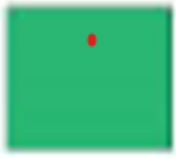
5. Which 2D shape is the face of a cube?





Independent Activity

Directions: Identify each shape as 2D or 3D and check the appropriate box.

	☐ 2D ☐ 3D
	☐ 2D ☐ 3D
	☐ 2D ☐ 3D
	☐ 2D ☐ 3D
	☐ 2D ☐ 3D





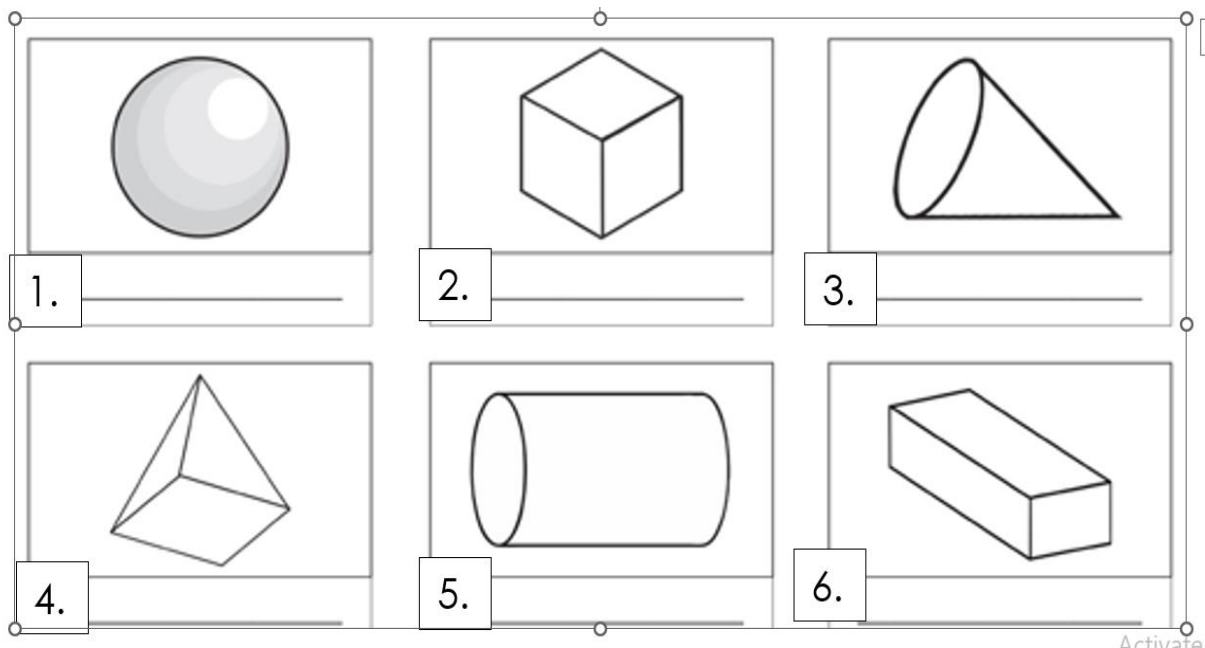
ARAL Summer Grade 2 Math

Session 20

Square, rectangle, triangle, and circle in 2- and 3-Dimensional Objects

Practice Activity

Directions: Name the 3D shapes below.



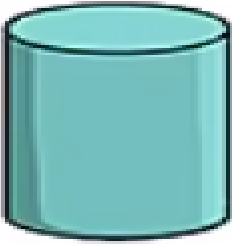
Independent Activity

Directions: Count the edges, faces, and vertices of the 3D shapes below.

1. 	edges: _____ faces/surface: _____ vertices: _____
--	---





2. 	edges: _____ faces/surface: _____ vertices: _____
3. 	edges: _____ faces/surface: _____ vertices: _____
4. 	edges: _____ faces/surface: _____ vertices: _____
5. 	edges: _____ faces/surface: _____ vertices: _____



