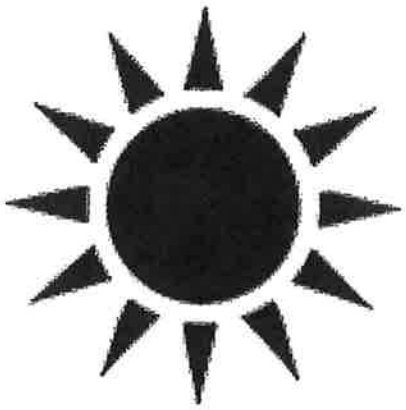
NTI DAY 23



Harrison County Schools

Name: _____

Grade: 4

Teacher: _____

Complete within 2 weeks of returning to school.

Day 23 Checklist (complete ALL items on the checklist)

Reading

____ Complete Story Scramble Sheet.

Math

____ Complete Daily Common Core Review 6-3

____ Mini Lesson 14-3 (Patterns: Repeating Shapes)
Video can be found at
https://media.pk12ls.com/curriculum/math/enVisionmath_CC20_K6_2016_EN/VLAs/A0281845/player.html or students can read the lesson of the video on the attached sheet page 746

____ Complete homework practice pages 749-750

Science

____ Read "Growth and Metamorphosis" Answer the six multiple choice questions and complete the open response on the answer sheet provided.

____ Learning Resource Video: Bill Nye "Life Cycles"

- https://www.youtube.com/watch?v=qxE3mkbRmqo

Library

____ Complete Library Activity - Book Report

Story Scramble

Stories have a structure with a beginning, middle, and end. Events happen in an order that makes sense.

The story events below are scrambled. Put the letters in order so that the story makes sense. Then discuss how each event influences what happens next.

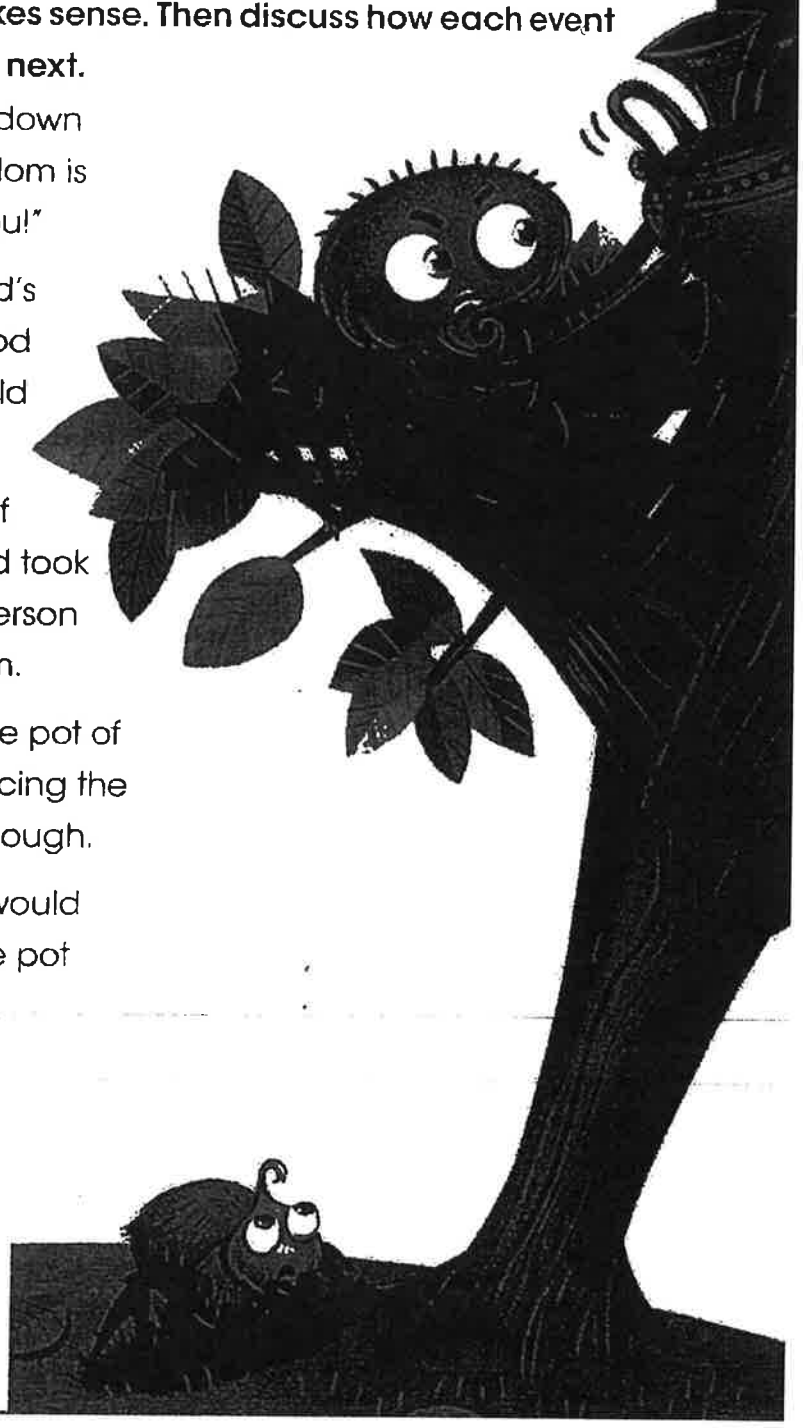
____ **A.** Despite the advice, Anansi threw down the pot, shouting, "The pot of wisdom is mine! I should know more than you!"

____ **B.** Anansi the spider had all the world's wisdom stored in a pot. The sky god Nyame had given it to him and told him to share it.

____ **C.** The pot broke. People found bits of wisdom scattered everywhere and took them home. That is why no one person today has all of the world's wisdom.

____ **D.** Greedy Anansi decided to hide the pot of wisdom at the top of a tree. Balancing the pot at the same time was tricky, though.

____ **E.** Anansi's young son told Anansi it would be easier to climb the tree with the pot tied to his back.



Name _____

Daily Common Core Review
6-3

1. Nick has $20. He wants to buy as many toy cars as he can. Each car costs $3. How many toy cars can Nick buy?

   Ⓐ 6 toy cars
   Ⓑ 7 toy cars
   Ⓒ 17 toy cars
   Ⓓ 23 toy cars

2. Round 394,294 to the nearest thousand.

   Ⓐ 395,000
   Ⓑ 394,000
   Ⓒ 390,000
   Ⓓ 380,000

3. Which statement best describes the equation below?

   $24 = 4 \times 6$

   Ⓐ 24 is 4 less than 6.
   Ⓑ 24 is 4 greater than 6.
   Ⓒ 24 is 6 times as many as 6.
   Ⓓ 24 is 4 times as many as 6.

4. Find the product of 83×56.

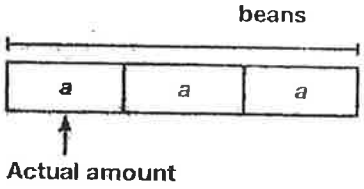
   Ⓐ 903
   Ⓑ 4,638
   Ⓒ 4,648
   Ⓓ 5,295

5. Select all the expressions that correctly use mental math to find the product of 4×321.

   ☐ $4 \times (300 + 20 + 1)$
   ☐ $4 + (300 \times 20 \times 1)$
   ☐ $4 \times (300 \times 20 \times 1)$
   ☐ $(4 \times 300) + (4 \times 20) + (4 \times 1)$
   ☐ $(4 + 300) + (4 + 20) + (4 + 1)$

6. Gabriella collected 68 trading cards. She shared them equally among 4 friends. How many cards did she give each of her friends?

7. Harry guesses there are 7,758 beans in a jar. His guess is 3 times the actual number of beans. Complete the bar diagram. Write and solve an equation to find the actual number of beans in the jar.



8. Pati plans to read two different books. One book has 97 pages. The other book has 183 pages. She wants to finish reading both books during her 7-day vacation. How many pages per day does Pati need to read?

9. A company has $3,500 to spend on amusement park tickets. Each ticket costs $9. What is the greatest number of tickets the company can buy?

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How ... to Predict a Shape?

A

Rashad is making a repeating pattern for the rule "Triangle, Square, Trapezoid."
What will be the 49th shape in the pattern?

A repeating pattern is made up of shapes or numbers that form a part that repeats.

B

Look for Features of the Repeating Pattern

The trapezoid is the 3rd, 6th, and 9th shape in the pattern. The positions of the trapezoids are multiples of 3.

The triangle is the 1st, 4th, and 7th shape in the pattern. The positions of the triangles are 1 more than a multiple of 3.

The square is the 2nd, 5th, and 8th shape in the pattern. The positions of the squares are 1 less than a multiple of 3.

Use the Repeating Pattern to Solve

When you divide 49 by 3, the quotient is 16 R1. The pattern repeats 16 times. The 1st shape in the repeating pattern, a triangle, then appears.

$$\begin{array}{r} 16\text{ R}1 \\ 3\overline{)49} \end{array}$$

You divide by 3 because there are 3 items in the repeating pattern.

49 is one more than a multiple of 3.

The 49th shape is a triangle.

Convince Me! **MP.6 Be Precise** Suppose the rule is "Square, Triangle, Square, Trapezoid" in a repeating pattern. What is the 26th shape in the pattern? Describe features of the repeating pattern. Be precise in your description.

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Name

Help | Practice Buddy | Tools | Games

Homework & Practice 14-3

Another Look!

Alan is using the rule below to make a repeating pattern. What is the 31st shape in Alan's pattern?

Rule: Rectangle, Circle, Square, Triangle

Divide: 31 ÷ 4 = 7 R3

The pattern repeats 7 times. Then 3 more shapes appear.

The third shape in the repeating pattern is the square.
The square is the 31st shape in the repeating pattern.

Every fourth shape is the same because there are four repeating items in the pattern.

For **1–4**, draw or write the next three items to continue each repeating pattern.

1. The rule is "Oval, Triangle."

2. The rule is "Short, Tall, Medium."

3. The rule is "2, 8, 9."

2, 8, 9, 2, 8, 9, 2, 8, 9, ...

4. The rule is "1, 2, 3, 4, 5."

1, 2, 3, 4, 5, 1, 2, 3, 4, ...

For **5–8**, determine the given shape or number in each repeating pattern.

5. The rule is "Star, Circle, Heart." What is the 17th shape?

6. The rule is "Add, Subtract, Multiply, Divide." What is the 100th shape?

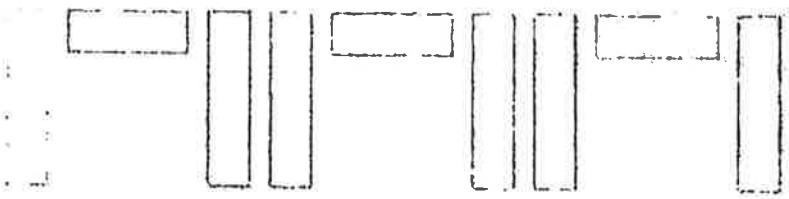
7. The rule is "1, 1, 1, 2." What is the 87th number?

1, 1, 1, 2, 1, 1, 1, 2, 1, 1, 1, 2, ...

8. The rule is "8, 9." What is the 100th number?

8, 9, 8, 9, 8, 9, ...

9. Stonehenge is an ancient monument in England thought to have been originally made up of a repeating pattern of rocks that looks like this:



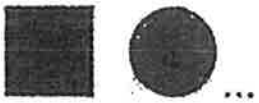
The rule is "Vertical, Horizontal, Vertical." Draw the 26th shape in the pattern.

10. **MP.2 Reasoning** Marcia is using the rule "Heart, Star, Star" to make a repeating pattern. She wants the pattern to repeat 6 times. How many stars will be in Marcia's pattern?

11. **Vocabulary** Describe the difference between *perimeter* and *area*.

12. **Higher Order Thinking** Tanji creates a "Square, Circle" repeating pattern. Kenji creates a "Square, Circle, Triangle, Circle" repeating pattern. If both Tanji and Kenji have 100 shapes in their patterns, which pattern contains more circles? Explain.

Tanji's Pattern



Kenji's Pattern

Common Core Assessment

13. Which rules give a repeating pattern that has a 9 as the 20th number? Select all that apply.

- ☐ 1, 9, 4
- ☐ 1, 2, 3, 9
- ☐ 9, 9, 9
- ☐ 1, 2, 9
- ☐ 9, 1, 4

14. Which rules give a repeating pattern that has a circle as the 20th shape? Select all that apply.

- ☐ Square, Circle
- ☐ Circle, Square, Triangle
- ☐ Trapezoid, Circle, Square
- ☐ Circle, Circle, Circle
- ☐ Circle, Triangle, Circle

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CHAPTER 2: Life Cycles

Read the article below to answer questions 1–7.

Growth and Metamorphosis

Life Stages

There are four stages in the human life cycle. Infancy is the first stage. You grew a lot. You also learned to walk and talk. The second stage is childhood. It lasts from infancy until you become a teenager. The third stage is adolescence. During adolescence your body starts to look like an adult's. Adulthood is the fourth stage. Adults are completely developed.

Other animals go through life stages, too. For example, cats and dogs start out small and grow to adulthood. However, they do not go through other major changes. This kind of growth is called direct development.

Metamorphosis

Some animals, such as frogs, butterflies, bees, flies, and moths, undergo metamorphosis. During metamorphosis, many changes occur in the body form of an animal.

Most amphibians, such as frogs, and some insects go through a complete metamorphosis. That means they change completely as they go from one stage of life to another. There are four stages in complete metamorphosis.

A frog starts life as an egg. It hatches in water, has a tail, and obtains oxygen through gills. It grows legs and loses its tail and gills. When the animal is fully grown, the adult frog can breathe air through lungs, and it lives on land.

A butterfly hatches from an egg as a larva. Then it grows. Next it turns into a pupa. It comes out of the pupa stage as an adult.

Incomplete Metamorphosis

Other insects go through an incomplete metamorphosis. When they are born, the young look like the adult, but they do not have all the adult's parts. Young grasshoppers, or nymphs, do not have wings. The nymphs grow wings only as they become adults.

PLEASE GO ON TO THE NEXT PAGE→

Kentucky Core Content for Assessment: SC-04-3.4.3 Students will compare a variety of life cycles of plants and animals in order to classify and make inferences about an organism.

Name _____ Date _____

KCCT

Please mark your answer for each multiple-choice question by filling in the circle completely for the correct answer. Mark only one answer for each question. If you do not know the answer, make your best guess.

1. What happens AFTER a larva turns into a pupa?
   - (A) The pupa changes into an adult.
   - (B) The pupa changes back to a larva.
   - (C) The pupa lays eggs.
   - (D) The pupa becomes a nymph.

2. What stage of a butterfly's life cycle comes just AFTER the egg?
   - (A) pupa
   - (B) larva
   - (C) nymph
   - (D) adult butterfly

3. Which animal goes through complete metamorphosis?
   - (A) butterfly
   - (B) dog
   - (C) grasshopper
   - (D) human

HINT Reread the section of the article that is titled "Metamorphosis."

4. How can an adult frog live on land?
   - (A) It loses its tail.
   - (B) It uses lungs to breathe.
   - (C) The adult female lays eggs.
   - (D) It uses gills to get air.

5. Which is an example of a nymph?
   - (A) a young butterfly
   - (B) a young frog
   - (C) an adult frog
   - (D) a young grasshopper

6. Which animal goes through direct development?
   - (A) a frog
   - (B) a grasshopper
   - (C) a horse
   - (D) a moth

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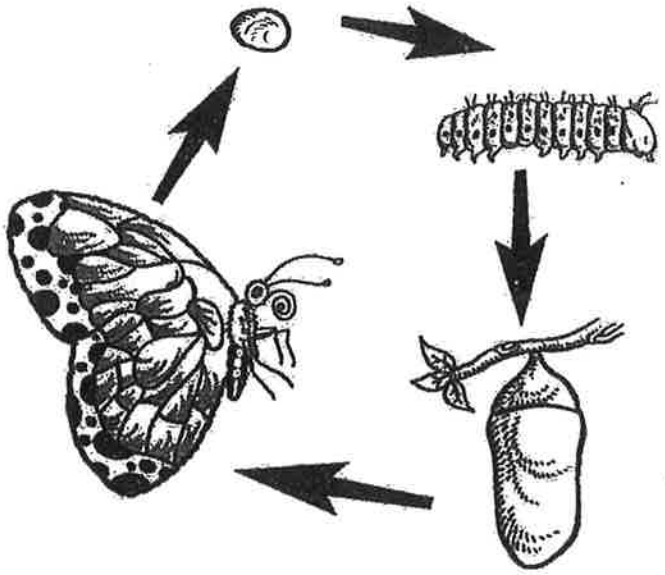
Name _____ Date _____

OPEN-RESPONSE QUESTION

Read all parts of the open-response question before you begin. Use the grid on the next page to create any required charts or graphs. If a question does not require a chart or graph, write your written response over the grid lines.

HINT Think about the stages in the life cycles of a butterfly and a grasshopper.

7. The picture shows the life cycle of a butterfly.



a. Identify whether the picture shows complete metamorphosis or incomplete metamorphosis. Explain how you know.

b. Describe TWO ways the life cycles of a butterfly and a grasshopper are similar and TWO ways the life cycles are different.

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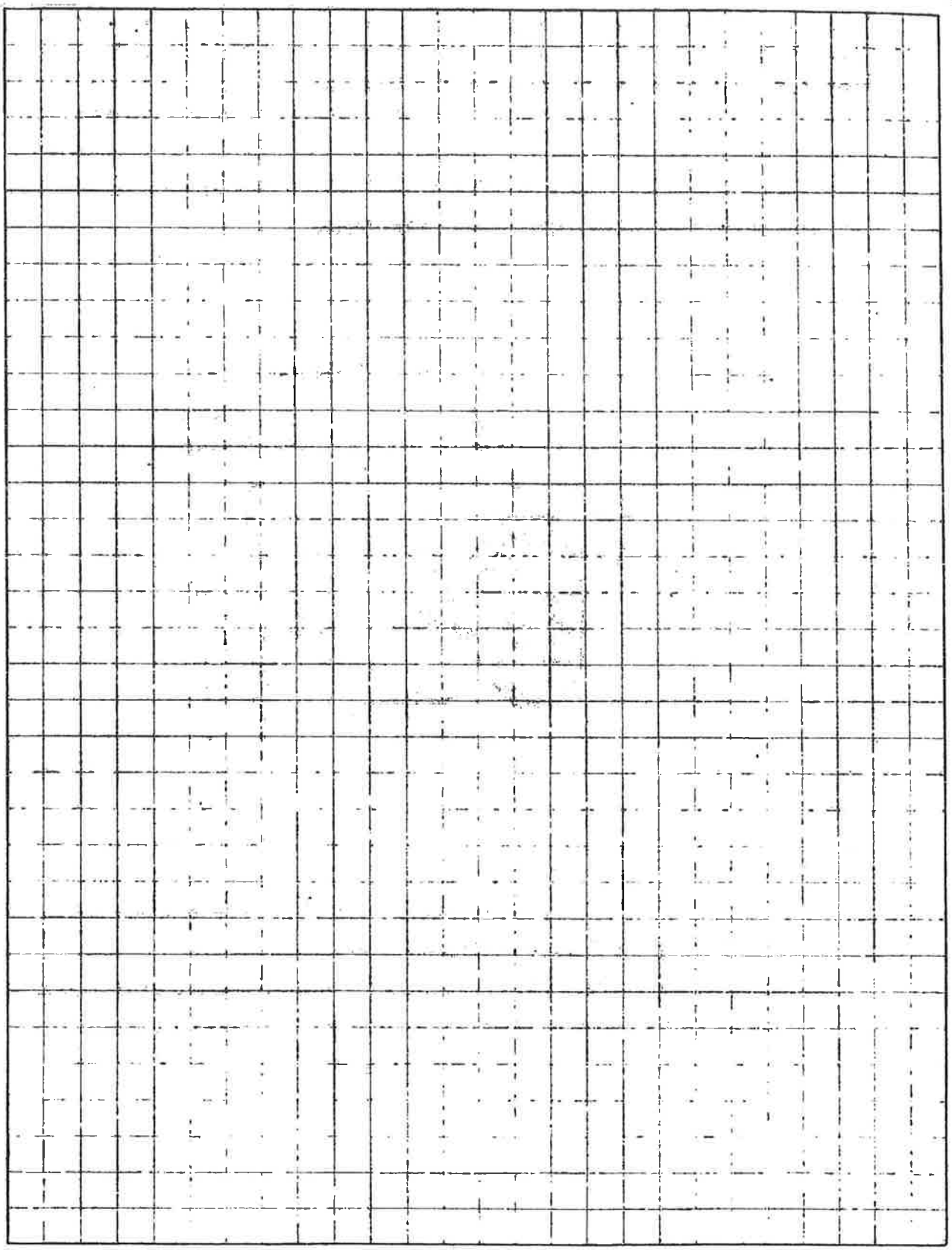

STOP!

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Library Activity for NTI Day 23
2nd-5th Grades

Directions: Read a book or e-book (or part of a book) of your choice for at least 20 min. Then respond below.

Book Title: _____

Author: _____

3 Things That Happened in Your Book

1.

2.

3.

2 Words or Phrases You Found Interesting

1.

2.

1 Thing Your Reading Made You Wonder About

1.