Rising to 4th Grade: Required Summer Activities

Reading and Writing:

Students will read BOTH: ***Clara and Davie*** by Patricia Polacco and ***Locomotion*** by Jacqueline Woodson (NOTE: *Locomotion* is written in poetry format. It is not rhyming poetry and not a book written in narrative form but we feel confident they will love it).

- After reading *Clara and Davie,* make a video of yourself (on a phone, tablet, etc.) answering the following questions.
    1. Using the text in the video to support your answers, tell something you learned about Clara (point to the picture or text that helped you) and tell something you learned about Davie (point to the picture or text that helped you).
    2. What do you think Patricia Polacco is trying to tell readers?
    3. Using the book in the video, describe your favorite part of the book and tell why you liked it so much.

Students will need to complete the following writing task for the book *Locomotion*.

- After reading *Locomotion,* complete the following writing task: Lonnie was asked to make journal entries so you are going to do the same thing. In a journal of your choice, make a bi-weekly journal entry (please write the date at the top of the page). When you are writing, just keep your pencil moving. Do not cross things out or edit, just write. There is no length it has to be, just please be proud of your entry each time.
    1. Entry 1: Describe a family member or friend in detail.
    2. Entry 2: Describe a favorite toy you had when you were very young.
    3. Entry 3: Describe in detail what your house smells like.
    4. Entry 4: Tell about how you felt when someone told you to be quiet.
    5. Entry 5: Tell all about one day of the week you really like or really dislike and why.
    6. Entry 6: Describe your favorite place.
    7. Entry 7: What does summer taste like?
    8. Entry 8: Open a book and choose a line at random. Use that as your first line of a free write.
    9. Entry 9: Choose an object from home but don't write the name of the object. Instead, write what it is like from the perspective of that object.
    10. Entry 10: LAST entry :) Tell what you are looking most forward to as a 4th grader.

Math

Key skills students should have entering 4 grade:

- Addition and Subtraction fact fluency within 30 (this always needs to be kept current)
- Hundreds, Tens and Ones place value knowledge
- Reading and writing time to the nearest 5 minutes
- Comparing numbers to 999 using <, =, >
- Rounding numbers to the nearest 10 and 100
- Use addition and subtraction with regrouping for three-digit numbers (within 1,000)
- Measure length using appropriate tools, comparing lengths using number sense
- Solve word problems involving money
- Fluently multiply and divide within 100 (multiplication and division facts 1-10 in mixed settings)
- Extend knowledge of multiplication facts to multiples of 10 (3 x 50 = 30 x 5 = 15 x 10 = 150)
- Understand fractions as numbers representing number of equal parts of a whole
- Compare fractions (<, =, >) using models and on a number line
- Understand fractions that represent whole numbers (all of the parts over the number of parts - 4/4 or 8/8)
- Compare two fractions with either a like numerator or denominator using reasoning about the size of the parts
- Recognize equivalent fractions using a same-size model or number line
- Estimate problems involving addition and subtraction using rounding.
- Geometric measurement: use multiplication and addition to solve area and perimeter problems of polygons

Workbook suggestions:

- Summer Bridge Activities 3-4

Math application suggestions for portable electronics/computers:

- Reflex Math for fact fluency (available for a fee)
- Khan Academy (free)
- IXL (20 questions per day free, also available for a fee)
- Sumdog for all math skills (available for a fee)
- Abcya.com (free)
- Math Planet Pro for all math skills (free)
- Bedtime Math for word problems (free)
- Splash Math (available for a fee)
- Math Playground (available for free)

We would like students to keep their math facts sharp - both in addition and subtraction - especially fluency within 30, and in multiplication and division within 100 (1-10 mixed multiplication facts).

We would like you to think about using Math in your everyday life. We would also like you to maintain the habit of writing down your math work. Please see below for a list of possible ways to practice math during the summer months. We would like you to be creative in how you would like to demonstrate evidence of the activity selections below - a poster, scrapbook, slide / powerpoint presentation, including pictures of at least two activities and bringing in either completed pages or scratch paper / written work completed, as well as writing a sentence or two about how the activity went (How did the game go?) We will present these work artifacts at the beginning of the year.

Museum Math
Calculate the current age of an artist, or how old they lived to be. Calculate how long ago an event was, the art was made or how old the building is. Compare these ages to your current age, your parents and grandparents. Were your parents born yet at this time period? Were your grandparents born yet in this time period? How does knowing this information impact your like or dislike of the event / artwork / artifact?

Seed Estimation
"Deadhead" a flower (marigolds produce a ton of seeds!) see if you can find the seeds. Choose a flower outside (not a cut florist variety, and not one currently in bloom) that has wilted and is dried up - this is called "deadheading" - taking off the dead flowers from a plant. Count the number of seeds created. (Marigolds make lots of long spear-shaped ones and gerber daisies make fluffy dandelion-seed like ones, for instance). Once you have counted the number of seeds, round them to the nearest 10. Count the number of other flowers or buds on the plant to see how many more flowers will produce seeds as well. Multiply the rounded number of seeds by the total number of flowers to calculate about how many seeds that plant will produce. How many plants could be produced? Do you think that's how many plants will be made? Why or why not?

Other options: Buy seed packets and count the number of seeds in one pack, round them to the nearest 10 and multiply by the number of seed packets bought. How many plants could be produced? Do you think that's how many plants will be made? Why or why not?

Further activities: Plant the seeds, observe and record the results - how many were produced? What was the area of the bed it was planted in, what was the perimeter? How far apart were the seeds? What worked well and what could have been done differently? How tall did the plants grow? Did they produce more seeds? If so, estimate how many.

Skip counting Hop-scotch
Use sidewalk chalk to create a hopscotch board. Number the squares through 10. Toss a small stone. Wherever it lands, skip count to x10 by that number. Repeat until you have done all math facts through x10. For example, stone lands on 4, skip count as you jump through the hop-scotch board 4,8,12,16,20,24,28,32,36,40.

Vingt-et-un dice game
The object of this game is to get as close to 21 without going over. The closest to 21 without going over wins! Roll two dice. Add up the pips. Roll one die again, re-add. Continue to add and re-roll until you get close to 21 or you go over! Then it is the other person's turn. Being able to add numbers fluently and quickly has never been so fun!

V*ariation*: Play with cards instead. Face cards (J,Q,K) are worth 10 points. Aces (A) are worth either 1 or 11, depending on if 11 will put you over or help you, and all other cards are worth their number. The probability of going over 21 changes with cards. If you are at 17 in the card game or 17 in the dice game, how is it different if you roll again or take a card?

Multiplication dice game
Using 2 or 4 dice, Roll and add 2 dice together. If using only 2 dice, roll again and add again, otherwise, if you are using 4 dice, add the other 2 dice for the second factor. Multiply those factors together. Record your score. Re-roll and repeat. Now add the new product to your score. Keep rolling and recording. The first person to go over 300 total wins! This keeps multiplication sharp through x12 and adds complexity with mental addition and addition with regrouping.

Variation: Play with cards instead. Face cards (J,Q,K) are worth 10 points. Aces (A) are 1. Flip two cards over. Add them. Flip another card, multiply the first factor by the second card (as the second factor). This will now include multiples of 10. For instance, Flip over two cards - J,K. Add them up = 20. Flip another card over - 4. Multiply 20 x 4 = 2 x 4 = 8 and 2 x 40 = 80.

Science: As rising 4th grade science students, the ability to read, understand, and apply nonfiction text is an important key to success. If you would like your child to practice these skills, we recommend a workbook called *Reading Fundamentals (Grade 4)* by FlashKids. It is sold online (https://www.amazon.com/Reading-Fundamentals-Nonfiction-Activities-Comprehension/dp/1411478843) as well as in stores such as Barnes & Noble. This is not a required summer activity, but is encouraged if you would like to help build your child's nonfiction reading skills while learning some fascinating information about science and history!

Optional task (Giraffe Club)
One of the organizations our school supports is the Helping Hands Food Pantry. With the help of a parent, research an organization in the area that could use support either with volunteering, donations, or a specific cause. Answer the questions below in a paragraph and be ready to share it with next year's fourth grade class.

1. What is the name of the organization and what do they do?
2. How do you think we could help them?
3. Find the name and number of a contact person and include that in your paragraph.
4. If you think they could use donations, what activity or activities would you want to do to raise money?

Name _____

Topics **1–16**
Cumulative/
Benchmark Assessment

1. Drake needs to be at his job by 7:00 P.M. It takes him 30 minutes to ride his bike to the job, 60 minutes to make and eat dinner, and 50 minutes to do chores. What time does Drake need to start his chores?

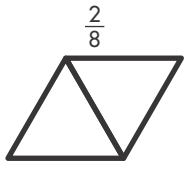
Ⓐ 4:20 P.M.

Ⓑ 4:40 P.M.

Ⓒ 5:05 P.M.

Ⓓ 5:40 P.M.

2. Draw a picture and write a fraction to represent the whole.



3. Which equation shows the Associative Property of Multiplication?

Ⓐ $3 \times 2 = (2 \times 2) + (1 \times 2)$

Ⓑ $(3 \times 2) \times 8 = 3 \times (2 \times 8)$

Ⓒ $3 \times 2 \times 1 = 3 \times 2$

Ⓓ $3 \times 2 \times 0 = 0$

4. Divide the number line into equal lengths and label the point $\frac{3}{5}$.

5. Find the difference for $861 - 384$. Explain how to solve the problem.

6. A. Three friends equally share 1 hour of time on a computer at the library. What fraction of an hour will each friend use the computer?

Ⓐ $\frac{3}{1}$ Ⓒ $\frac{2}{3}$

Ⓑ $\frac{3}{3}$ Ⓓ $\frac{1}{3}$

B. If two more friends join the group, what fraction of an hour will each friend have to use the computer?

Ⓐ $\frac{1}{5}$ Ⓒ $\frac{2}{3}$

Ⓑ $\frac{1}{6}$ Ⓓ $\frac{5}{1}$

7. Explain how to break apart $483 + 316$ and solve.

8. Kelly is decorating her room with a mirror and 3 decals. If the mirror costs $12 and the decals are $7 each, how much will Kelly spend?

9. Which shapes always have two pairs of sides on lines that never cross? Select all that apply.

- ☐ Square
- ☐ Parallelogram
- ☐ Rectangle
- ☐ Rhombus
- ☐ Trapezoid

10. Find the sum of 60 and 150.

11. Jerra is making a rectangular garden 9 feet long and 6 feet wide.

A. What is the perimeter of Jerra's garden?

B. Jerra plans to put a fence around the garden with fence posts that are 3 feet apart. How many fence posts will she need? Draw a picture to help solve the problem.

12. Write an addition problem with two 3-digit numbers that requires regrouping. Then write an addition problem with two 3-digit numbers that does **NOT** require regrouping.

13. Jolene said that $\frac{1}{4}$ is greater than $\frac{1}{2}$ because 4 is greater than 2. Is she correct?

Ⓐ Yes, she is correct. The correct comparison is $\frac{1}{4} > \frac{1}{2}$.

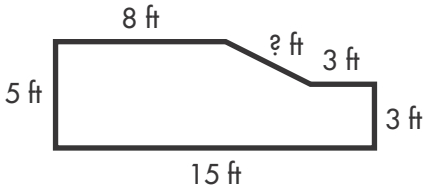
Ⓑ No, a whole divided into 4 equal parts has smaller parts than if the whole were divided into 2 equal parts. The correct comparison is $\frac{1}{4} < \frac{1}{2}$.

Ⓒ No, the denominators do not help you find which fraction is greater. The correct comparison is $\frac{1}{2} = \frac{1}{4}$.

Ⓓ No, fractions that both have a numerator of 1 are always equal. The correct comparison is $\frac{1}{2} = \frac{1}{4}$.

14. Renee says that her insulated mug will hold 10 liters of hot chocolate. Is this reasonable? Explain.

15. A. Regina is building a fence around her garden as shown below. She used 40 feet of fencing. What is the length of the side Regina did not measure?



Ⓐ 4 feet
Ⓒ 6 feet
Ⓑ 5 feet
Ⓓ 7 feet

B. Regina's neighbor George also uses 40 feet of fencing for his rectangular garden. Which could be the dimensions of George's garden? Select all that apply.

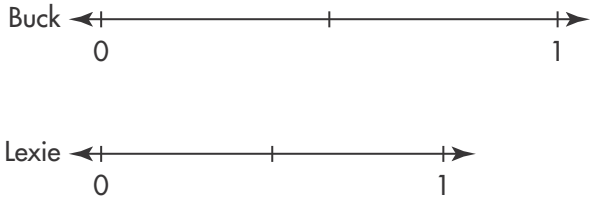
- ☐ 8 feet by 5 feet
- ☐ 16 feet by 4 feet
- ☐ 8 feet by 9 feet
- ☐ 11 feet by 9 feet
- ☐ 10 feet by 10 feet

16. Select all of the terms that can describe the figure.

- ☐ Parallelogram
- ☐ Quadrilateral
- ☐ Polygon
- ☐ Rhombus
- ☐ Trapezoid

17. Maya plans to serve dinner at 6:00 P.M. It takes Maya 20 minutes to iron her clothes, 45 minutes to clean up the house, and 50 minutes to prepare dinner. If Maya wants to iron before cleaning and preparing dinner, what time should she start ironing her clothes? Use a number line to show your reasoning.

18. Lexie drew a number line showing $\frac{1}{2}$. Buck did the same.



A. Which answer explains why their number lines look different?

Ⓐ Lexie's number line is longer.

Ⓑ Lexie's number line shows thirds.

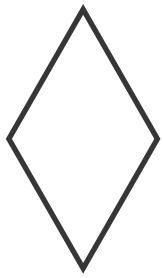
Ⓒ The distance from 0 to 1 is different.

Ⓓ They are not different, both show $\frac{1}{2}$.

B. Lexie and Buck use number lines that have the same distance from 0 to 1. Lexie draws $\frac{5}{8}$ on her number line and Buck draws $\frac{3}{8}$ on his number line. Whose fraction is greater? Explain.

19. Chad and Amanda went shopping. They spent 33 minutes in the toy store and 47 minutes in the clothing store. How long did Chad and Amanda spend shopping?

20. This figure is a rhombus, but it is **NOT** a square. Why?



21. Write two fractions with a denominator of 6 that are closer to 0 than to 1. Explain your reasoning.

22. A sponge soaks up water. Leah says that the sponge can soak up 30 liters of water. Is her answer reasonable?

Ⓐ No. Leah probably meant $\frac{1}{3}$ liter instead of 30 liters.

Ⓑ No. Leah probably meant 3 liters instead of 30 liters.

Ⓒ No. Leah probably meant 3 grams instead of 30 liters.

Ⓓ Yes. Three liters is a reasonable amount of water in a sponge.

23. What are the dimensions of 4 rectangles that have a perimeter of 16 feet?

A. What is the area of each of the rectangles?

B. What generalization can you make from your answer?

24. A rectangle with a perimeter of 16 inches has the same area as a rectangle that has a perimeter of 14 inches.

A. What is the area of the two rectangles?

B. What are the dimensions of each rectangle?

25. Natasha bought some green grapes that weigh 47 grams. She also bought some purple grapes that weigh 61 grams. Using the weights shown, what are two combinations of weights that would balance the total weight of Natasha's grapes?

26. A. Carlos is making a square picture frame. The length of one side is 8 inches. What is the perimeter of the picture frame?

Ⓐ 16 inches

Ⓑ 32 inches

Ⓒ 40 inches

Ⓓ 64 inches

B. Carlos wants to make a rectangular picture frame with the same perimeter. What could be the dimensions of the rectangular picture frame?

27. A quadrilateral with 1 pair of sides of equal length and only 1 right angle is **NOT** a rhombus. Why?

Ⓐ A rhombus cannot have right angles.

Ⓑ A rhombus must have 4 right angles.

Ⓒ All 4 sides of a rhombus are the same length.

Ⓓ A rhombus cannot have sides of equal length.

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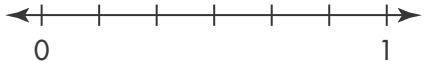
28. Sue ran $\frac{2}{6}$ mile on Monday and $\frac{3}{6}$ mile on Tuesday.

A. Which day did she run farther? Use the number line to help solve.



Ⓐ Monday

Ⓑ Tuesday

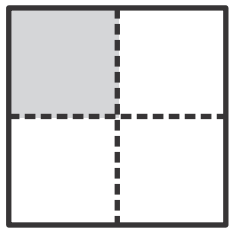
Ⓒ She ran the same distance both days.

Ⓓ Not enough information given

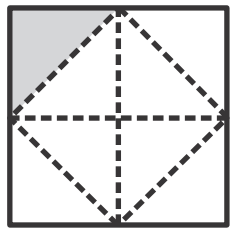
B. On Wednesday, Sue ran $\frac{3}{8}$ mile. She says the distance she ran on Wednesday is the same as the distance she ran on Tuesday. Is she correct? Explain.

29. A. Cheryl has 2 fabrics. Which best describes the relationship between the shaded area of each fabric?

Fabric 1



Fabric 2



Ⓐ $\frac{1}{4} > \frac{1}{8}$

Ⓑ $\frac{1}{4} = \frac{1}{8}$

Ⓒ $\frac{1}{4} < \frac{1}{8}$

Ⓓ Not enough information given

B. Suppose 1 more small square is shaded in Fabric 1. Which fraction describes the total amount of Fabric 2 that must be shaded for the two fabrics to show the same amount shaded?

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30. A. An all-city swim meet started at 10:30 A.M. It ended at 4:45 P.M. How long did the swim meet last?

Ⓐ 4 hours 15 minutes

Ⓑ 5 hours 45 minutes

Ⓒ 6 hours

Ⓓ 6 hours 15 minutes

B. There is a 45-minute lunch break during the swim meet. How long does the meet last not including the lunch break?

