Getting ready for Grade 8!

In Grade 7, instructional time in math focused on four critical areas:

Critical Area One

Developing understanding of and applying proportional relationships

Critical Area Two

Developing understanding of operations with rational numbers and working with expressions and linear equations

Critical Area Three

Solving problems involving scale drawings and informal geometric constructions, angles, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume

Critical Area Four

Drawing inferences about populations based on samples

Discover mathematics all around you this summer!!! Just as with reading, regular practice over the summer with problem solving, computation, and math facts will maintain and strengthen the mathematical gains you made over the school year.

Attached you will find creative mathematics activities to explore at home. The goal is for you to have fun thinking and working collaboratively to communicate mathematical ideas. While you are working, ask how the solution was found and why a particular strategy was chosen.

The Summer Math Learning Packet consists of 2 calendar pages, one for July and one for August. Literature and websites are also recommended to explore mathematics in new ways. We encourage you to complete at least 15 math days each month.

Just a few minutes each day spent "thinking and talking math" will help reinforce the math that has been learned and begin to bridge the foundation for extending to the concepts that will be developed next year. The goal is for your child to have fun thinking and working collaboratively to communicate mathematical ideas. While your child is working, discuss the math concept being reinforced.

We hope that you will enjoy the activities, extend them, create new ones and have fun!

DOs and DON'Ts For Parents Helping at Home

DO:

- Expect your child to work hard and be good at math.
- Ask "How did you get that?" "Can you show me another way to do that?" "Remember how you did ____, see if you can use that same strategy."
- Encourage your child to stick with a task even if it seems challenging.
- If you see signs of frustration, suggest leaving the problem for a day or two and returning to it with fresh perspective at another point.
- Listen carefully to how your child is thinking about math.

DON'T:

- Try not to tell your child how to figure something out; he or she will learn much more by figuring it out for him or herself. You can always say, "Show me how you figured that out." Then wait and listen and say, "Oh, that's nifty. Here's how I might figure it out. How are our strategies the same?"

DO ASK – DON'T TELL **You can ask great questions without telling your child what to do!**

In the beginning....

What do you know?
What do you need to find out? How might you begin?
What should you do first?

While working....

How can you organize your information?
What would happen if...?
Do you see any patterns? Any relationships?
Does this remind you of any other problems you've done?
Can you make a drawing to explain your thinking?
What do you need to do next?
Can you predict....?

Reflecting on Solutions...

Is your solution reasonable?
How did you arrive at your answer?
Can you convince me that your solution makes sense? What did you try that didn't work?

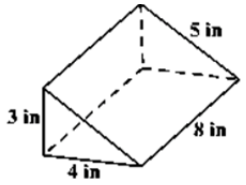
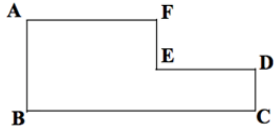
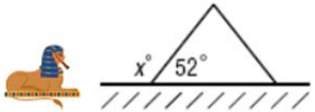
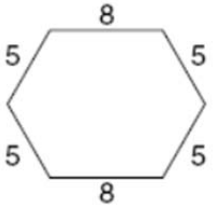
Responding...

Your response is as important as your initial question. Continue to discuss problems even after children have their answer. This will give your child a chance to clarify thinking and make more connections.

You can ask: How do you know that your answer makes sense? Do you know another way to solve this? Do you think there is more than one answer? How could we find out?

We hope that you will enjoy the activities, extend them, create new ones and have fun!

	Monday	Tuesday	Wednesday	Thursday	Friday	
	JULY 2018					
1.	2. There are three choices of jellybeans: grape, cherry and orange. If the probability of getting a grape is 3/10 and the probability of getting cherry is 1/5, what is the probability of getting orange?	3. Joe has an 80:1 scale- drawing of the floor plan of his house. On the floor plan, the dimensions of his rectangular living room are 1 7/8 inches by 2 1/2 inches. What is the area of living room in square feet?	4. Mia's cell phone plan: *$15 a month plus free texts plus $0.20 per minute of call time.* Mia made 30 minutes of calls this month, and 110 texts. How much does she have to pay?	5. A menu has these options for sandwiches: 3 types of bread, 4 meat choices, 5 topping choices. How many possible sandwiches can be made? Can you create a different menu with the same outcome?	6. May 1st Jay's mom gives him 1 cent. Each day, she pays double the amount she paid the day before. How much money did Mike earn in total by May 15?	**7.**
8.	9. Twice a number (n) minus nine is ninety-five. Find the number (n).	10. Can a triangle have more than one obtuse angle? Will three sides of any length create a triangle?	11. If the product of 6 integers is negative, at most how many of the integers can be negative?	12. Using a grocery store receipt, figure what percentage of the bill was spent on vegetables, meat, drinks, junk food	13. Games Unlimited buys video games for $10. The store increases the price 300%. What is the price of the video game?	**14.**
15.	16. Dan's salary is $70 less than Sam's, whose weekly salary is $50 more than Jen's. If Jen earns $280 per week, how much money does Dan earn per week?	17. Dave buys 2 pineapples and some bananas. One pineapple is $2.99. Bananas are $0.67 per lb. He wants to spend less than $10.00. Write an inequality that represents the n umber of pounds of bananas, ***b***, he can buy.	18. The length and the width of a rectangle are both doubled. What is the ratio of the area of the larger rectangle to the area of the smaller rectangle?	19. Without parantheses, the expression $8 + 30 \div 2 + 4$ equals 27. Insert parantheses in the expression to make it equal 13. Then 23.	20. The pages of a book are numbered consecutively from 1 to 275. How many times is the digit 8 used in numbering the pages?	**21.**
24.	23. 33.3% is the answer. What could the question possibly be? Challenge yourself to think of more questions.	24. Which is a better price? Why? a. 15oz. for $1.79 b. 12 oz. for $1.49	25. Play a strategy game. Ex. Monopoly, Parcheesi, Mancala, Connect Four … What strategy did you use?	26. Solve: $3w + 2 = 20$ Can you write a real world problem that this equation represents?	27. Play **Sudoku** from the newspaper How did logic help you to solve the puzzle?	28

	JULY Monday	Tuesday	AUGUST Wednesday	Thursday	Friday	
30. Alicia planted 45 tulip bulbs last year. This year she plans to plant 65 bulbs. Determine the percent of increase in the number of tulip bulbs.		31. It is recommended for every 8 square meters of surface, a pond should have 2 fish. A pond that has a surface of 72 square meters should contain how many fish?	1. Lois has 3 1/3 pounds of butter. She uses ¾ pound in a recipe. How much does she have left?	2. A garden in the shape of a triangle has an area of 875 square meters. The garden is 35 meters long. Determine the width of the garden at its widest point.	3. A car salesman earns 7% commission on his total sales this month. If he sells 2 cars at $15,670 each, and a truck at $25,995, how much commission will he earn?	**4.**
5.	6. Determine the surface area of this geometric figure.  	7. Sherry is designing a garden. She drew the following scale drawing for the garden with a scale of 25 cm = 3 m. Use a ruler to determine the actual width of the garden  	8. A side view of the Great Pyramid at Giza is shown below. The sides of the pyramid make an angle of 52 with respect to the ground. What is the value of x?  	9. Mr. Brooks was working on addition using dominoes with a group of 1st graders. When picking the domino with 3 dots on one end and 5 dots on the other, some students read. "3 plus 5 equals 8" while other read it as "5 plus 3 equals 8." What property were these students using? Explain.	10. For the hexagon below write a numerical expression to find the perimeter. Then evaluate the expression. How could you find the area?  	**11.**
12.	13. Jake's club has 35 members. Its rules require that 60% of them must be present for any vote. At least how many members must be present to have a vote?	14. In Mongolia the temperature can dip down to –45°C in January. The temperature in July may reach 40° C. What is the temperature range in Mongolia?	15. The lifespan of a zebra is 15 years. The lifespan of a black bear is 3 years longer than the lifespan of a zebra. Write an addition equation that you could use to find the lifespan of a bear.	16. In baseball, David has 10 hits out of 14 at bats. Adam has 15 hits out of 21 at bats. For each player, write a ratio that represents his total number of hits out of times at bat. Are these ratios equivalent?	17. There were 6 girls and 18 boys in Mrs. Johnson's math class. Write a ratio of the # of girls to the # of boys in fraction form. Then write the fraction as a repeating decimal.	**18.**
19.	20. One sixth of the students at a local college are seniors. The number of freshmen students is 2 ½ times that amount. What fraction of the students are freshmen?	21. Write an addition expression to describe skateboarding situation. Then determine the sum. Hank starts at the bottom of a half pipe 6 feet below street level. He rises 14 feet at the top of his kick-turn.	22. The electric company charges $0.06 per kilowatt hour of electricity used. Write a multiplication equation to find the number of kilowatt hours of electricity for which the Estevez family was charged if their electric bill was $45.84.	23. A packaging company needs to know how much cardboard will be required to make boxes 18 inches long, 12 inches wide, and 10 inches high. How much cardboard will be needed for each box if there is no overlap in the construction?	24. Your PE teacher asked you to run for specific time period. You ran 0.6 of the time. Two of your friends ran $\frac{7}{10}$ and 72% of the time. Order the amount of time you and your friends ran from least to greatest	**25.**
26	27. The diameter of the base of a cylinder is 4 inches. The height is 10 inches. Find the surface area. Find the volume	28. An online retailer charges $6.99 plus $0.55 per pound to ship electronics purchases. How many pounds is a DVD player for which the shipping charge is $11.94	29 The time shown on a clock is 11:05. Starting at this time, approximately what time will it be when the hands form an obtuse angle.	30 A quiche recipe calls for 2 ¾ cups of grated cheese. A recipe for quesadillas requires $3\frac{1}{3}$ cups of grated cheese. What is the total amount of grated cheese needed for both recipes?	31. Free Day! Sept. 4 is New student Orientation and Sept 5 is the first day of School!	Sept. 1