Mathematics in the Summertime

Dear Families,

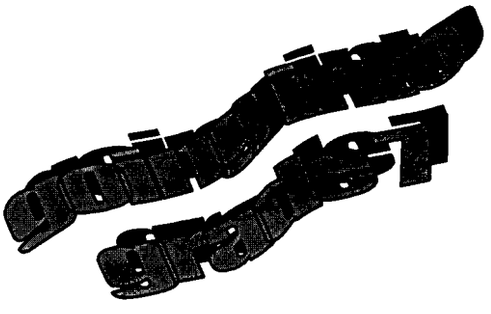
As families begin to make plans for spending a fabulous summer together, we would like to remind you to look for ways to include some mathematics practice or games so your child, or children, will be ready for the work ahead in September. Try to make time to estimate costs at the store, estimate time for completing a journey, challenge each other with mental calculations, count change, read sale flyers and look for ways to spend $10 or $20, read schedules or sports data, measure all sorts of things, figure how many pages are left to read in a book, figure the tip at a restaurant, and so on. Look for math everywhere in everyday situations.

We want all students to do well on the MCAS tests in mathematics. Practice during the summer is an important way to help reinforce ideas learned during the past school year. Attached are some problems matched to the standards that students should have mastered in grade 6. We hope you and your child will take these practice problems seriously. The teachers in grade 7 will expect students to complete these sheets and bring them to class on the first day of school after Labor Day. **This packet will be the first graded assignment of the new school year.**

On rainy days, or those days when there isn't much to do, your child could explore some mathematics using the Internet. There is a new site that I just found and like very much, internet4classrooms.com which has both **math** and language arts lessons/activities for grades K – 8.
Some other sites you might want to visit are:
www.doe.mass.edu for all old MCAS test questions
www.aaamath.com
www.aplusmath.com
www.cybersleuth-kids.com
www.factmonster.com
www.mathcats.com
www.mathplayground.com

Happy summer! Have fun playing around with math.

Deborah O'Brien
Math Specialist K - 8



MATH IN THE SUMMERTIME

FOR STUDENTS ENTERING GRADE 7 IN SEPTEMBER

Number and Operations

1. Write these fractions, decimals, and percents in order from **least to greatest**:

$\frac{3}{5}, 20\%, \frac{1}{8}, \frac{5}{6}, 75\%, \frac{2}{3}, \frac{1}{10}, 0.25, 0.8, \frac{3}{4}$

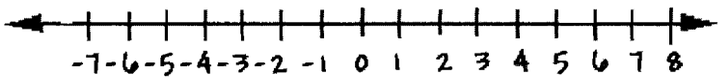
2. Calculate the answers to these arithmetic examples. **Show all your work.**

$^{-}3 + ^{-}12 + 9 + 12$

$5(4+3) - 6 + 2 \times 4$

3^4

3. Use the number line to find the answers to the following examples.



$2 + 6 = ?$ $\quad\quad$ $3 + (-7) = ?$

$5 - 2 = ?$ $\quad\quad$ $-4 + (-1) = ?$

4. At the movie theater, tickets cost $7.50 each, candy bars cost $1.75 each, popcorn costs $4.50 for a small bucket, and soda costs $2.50 each cup. Louise and Mike plan to go to the movies and want to have something to snack on while there. If they have a total of $20.00, will they have enough for their plan? Explain you reasoning.

5. Write the fraction $\frac{5}{8}$ in at least five different ways.

(example: $\frac{1}{2}=\frac{2}{4}=\frac{3}{6}=\frac{4}{8}$ are all one-way – equivalent fractions)

6. Calculate these arithmetic examples. Show all your work.

a) $12.09+6+4.82+1.5$

b) $48-16.98$

c) 98.6×16

Patterns, Relations, and Algebra

7. Write the missing items in each pattern:

a) 1, 1, 2, 3 ,5, 8, 13, ____, ____, ____

b) $\frac{1}{6},\frac{1}{3},\frac{1}{2},\frac{2}{3},\frac{5}{6},1,\frac{7}{6},\frac{4}{3},\frac{3}{2}$, ____, ____, ____

c) 156, 153, 150, 147, 144, ____, ____, ____

8. Solve these equations.

a) $x+27=129$

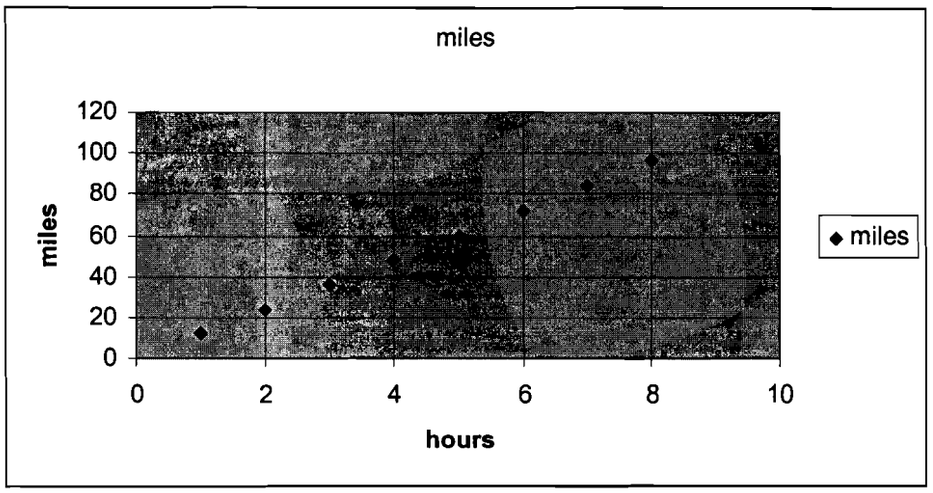
b) $15\times a=675$

c) $45=3\times f-33$

9. Find the missing values in this input-output table. Explain how you know.

Input	Output
1	3
2	7
3	11
4	15
5	
	39
20	

10. This is a graph of the total miles traveled by a bicycle rider.



a) How many miles were traveled at 5 hours? _____

b) At this same rate, how long would it take to go 125 miles? _____

Data Analysis, Statistics, and Probability

11. These are the ages of all the people at a family picnic:
83,80,63,58,31,32,4,2,27,28,2, 64, 55,38, 37, 12, 15

a) Make a line plot of this data.

b) Find the median, mode, and mean of the ages. _____

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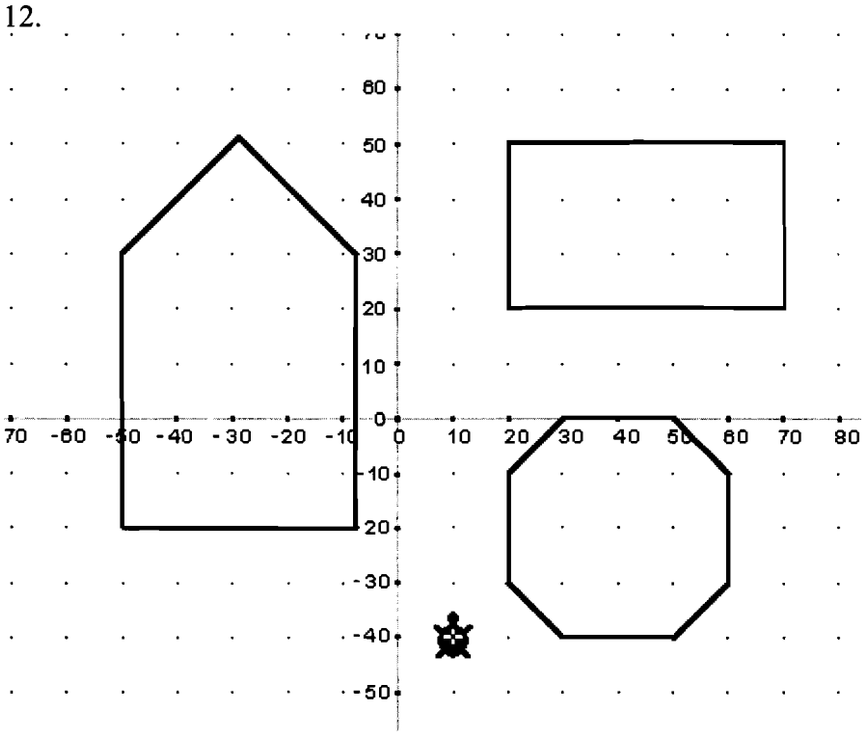
Geometry

12.



a). Draw all the lines of symmetry in these figures.

b). Name each of these polygons.

_____ _____ _____

Measurement

16. List all possible rectangles with whole number sides and a perimeter of 24.
What is the greatest area? _____
What is the least area? _____

Length							
Width							
Area							

17. Jonathan took a bicycle trip starting at 8:30 in the morning until 2:15 in the afternoon. He rode all the time except he stopped for lunch from 11:30 until 12:00. How much time did he spend riding?

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FACT & OPERATION REVIEW

1. $6\frac{15}{18} - 1\frac{8}{18}$

2. $9265 - 5167$

3. $7572 - 2673$

4. $651\overline{)9267}$

5. 5206×385

6. $461\overline{)3111}$

7. $83\overline{)192}$

8. $4656 - 1323$

9. 9818×9791

10. $8138 - 6125$

11. $6735 + 5807$

12. $0.966 + 8.207$

13. 619×926

14. $7\overline{)901}$

15. $7\frac{19}{20} - 4\frac{17}{20}$

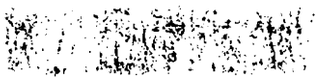
16. $9\frac{6}{17} - 3\frac{3}{17}$

17. $6\overline{)281}$

18. $9\frac{6}{20} - 2\frac{14}{20}$

19. 4313×5445

20. $5\overline{)806}$



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I have completed this math work (choose one)

[ ] By myself
[ ] With some help
[ ] With a lot of help

Here is evidence that I used math during the summer:

- ❑ estimated costs at the store (when, where, how much)
- ❑ estimated time for completing a journey (when, where, how far)
- ❑ challenged someone with mental calculations (who, when, where, results)
- ❑ counted change (when, where, how much)
- ❑ read sale flyers and looked for ways to spend $10 or $20 (what store, amounts)
- ❑ read schedules or sports data (where, when)
- ❑ measured all sorts of things (what, where, why, what tools)
- ❑ figured how many pages are left to read in a book (when, name of book)
- ❑ figured the tip at a restaurant (when, where, amount)
- ❑ other (Give details)