

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.

Attached are sheets of review problems for students who will enter grade 6 in September. The teachers in grade 6 will expect students to complete these sheets and to be ready to discuss the results at the beginning of our next school year.

On rainy days, your child could explore some mathematics using some of these websites.

<http://www.bbc.co.uk/education/mathsfile/shockwave/games/gridgame.html>

Spin the wheel and let Pythagoras and Hypatia show you some fun. There are games on numbers, algebra, measurement, and probability. Games can be played with sound on or off.

<http://www.mathcats.com/>

Open-ended mathematics exploration through art, projects, and games

<http://matti.usu.edu/nlvm/nav/vlibrary.html>

Interactive activities in all strands of mathematics

<http://www.netrover.com/~kingskid/MulTab/Applet.html>

Practice multiplication facts with visual representation.

<http://www.aplusmath.com>

Drill and practice with flashcards and interactive games.

<http://mathforum.org/>

Solve Problems of the Week or pose a question to Dr. Math

<http://www.visualfractions.com>

Practice fractions with pictures and games.

<http://www.aaamath.com>

Drill and practice in all math areas PLUS interactive math games.

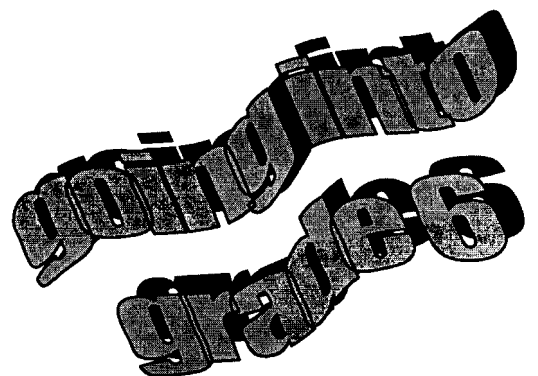
www.doe.mass.edu/mcas/testitems

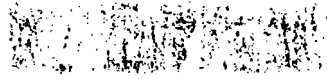
Dept of Education website with MCAS questions and answers

Happy summer! Have fun playing around with math.

Deborah O'Brien

Mathematics Specialist K – 8





Math in the Summertime
for students entering grade 6 in September
Number and Operations

1. List all the factor pairs for the following numbers.
The first number list is started for you.

24

48

60

1 x 24
2 x 12
3 x ____

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

a) 347×89

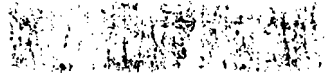
b) 563×100

c) $15 \overline{)375}$

3. 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, $\frac{3}{4}$

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 your reasoning.



Math in the Summertime
for students entering grade 6 in September

5. Write the fraction $\frac{3}{4}$ in at least five different ways.

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

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

a) $1.5 + 2.09 + 6 + 4.82$

b) $38 - 16.98$

c) 98.6×15

Patterns, Relations, and Algebra

7. Write the missing items in each pattern:

a) 1, 2, 4, 7, 10, 15, _____, _____, _____

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

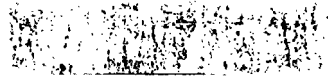
c) 56, 59, 62, 65, 68, _____, _____, _____

8. Solve these equations.

a) $x + 7 = 29$

b) $5 \times a = 625$

c) $15 = 3 \times f - 33$



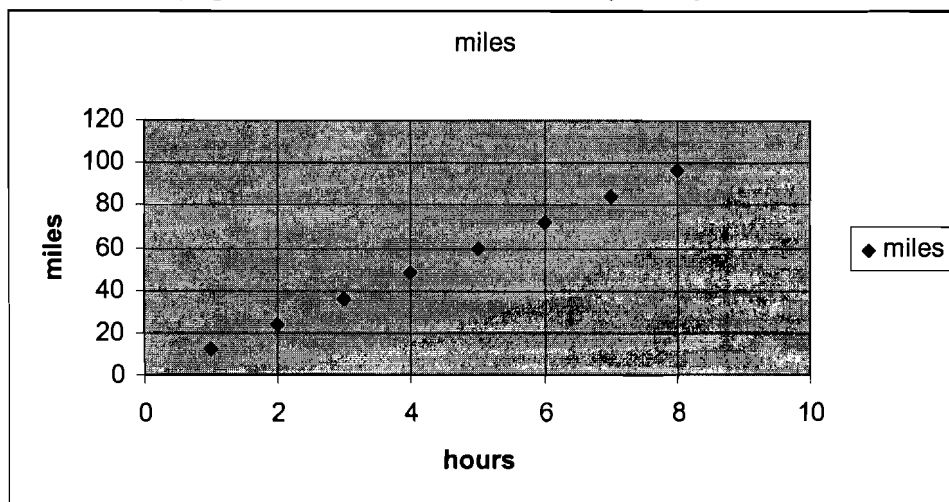
Math in the Summertime

for students entering grade 6 in September

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

Input	Output
1	5
2	9
3	13
4	17
5	
	41
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? _____

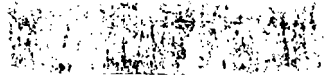
Data Analysis, Statistics, and Probability

11. These are the number of runs scored by the Boston Red Sox in April and early May:

4, 4, 5, 7, 13, 2, 7, 6, 3, 10, 2, 0, 6, 8, 3, 4, 16, 5, 7, 10, 12, 2, 6, 10, 8, 5, 2, 4, 5, 3, 2

a) Make a line plot of this data.

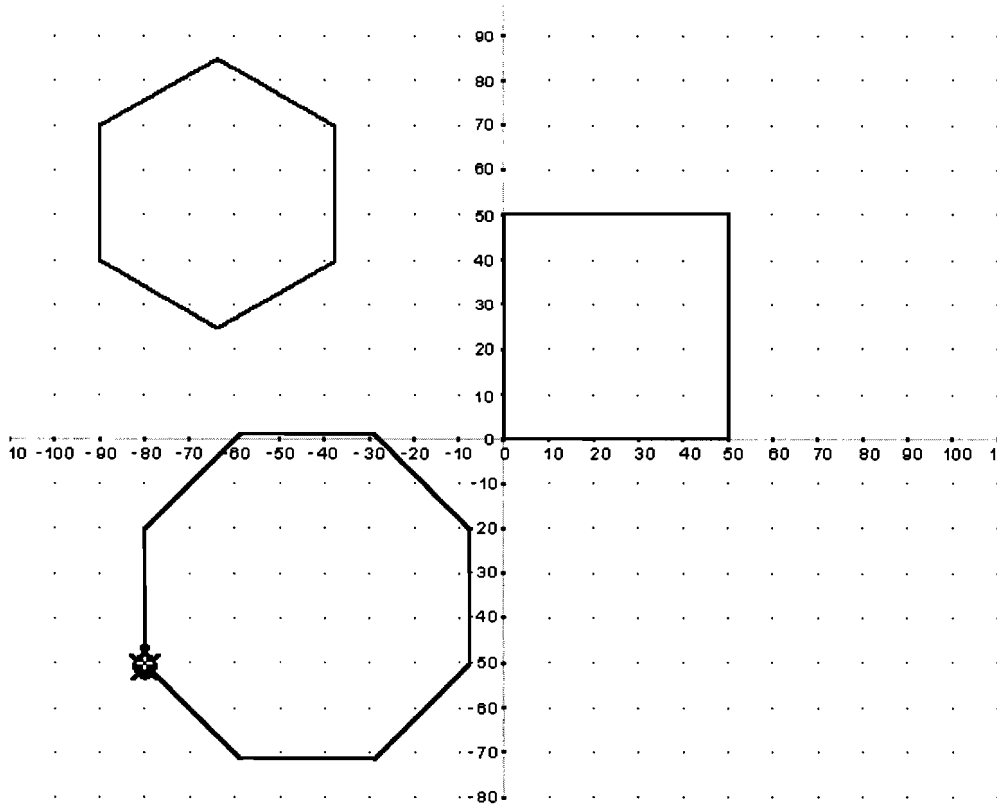
b) Find the **range**, **median**, **mode**, and **mean** of the data.



Math in the Summertime

for students entering grade 6 in September
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 20.

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 11:00 until 11:30. How much time did he spend riding?



Math in the Summertime

for students entering grade 6 in September

MULTIPLICATION & DIVISION PRACTICE

$$\begin{array}{r} 34 \\ \times 96 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ \times 54 \\ \hline \end{array}$$

$$7 \overline{)25}$$

$$\begin{array}{r} 94 \\ \times 61 \\ \hline \end{array}$$

$$\begin{array}{r} 49 \\ \times 38 \\ \hline \end{array}$$

$$\begin{array}{r} 67 \\ \times 71 \\ \hline \end{array}$$

$$\begin{array}{r} 46 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ \times 8 \\ \hline \end{array}$$

$$3 \overline{)550}$$

$$1 \overline{)814}$$

$$\begin{array}{r} 64 \\ \times 96 \\ \hline \end{array}$$

$$\begin{array}{r} 19 \\ \times 6 \\ \hline \end{array}$$

$$5 \overline{)265}$$

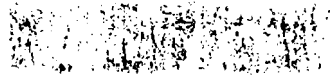
$$\begin{array}{r} 47 \\ \times 9 \\ \hline \end{array}$$

$$5 \overline{)375}$$

$$\begin{array}{r} 56 \\ \times 82 \\ \hline \end{array}$$

$$\begin{array}{r} 77 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ \times 9 \\ \hline \end{array}$$



Math in the Summertime

for students entering grade 6 in September

Fractions, Fractions, and More Fractions . . .

Convert each improper fraction to a mixed fraction.

$$\frac{5}{3} = \underline{\hspace{2cm}}$$

$$\frac{5}{4} = \underline{\hspace{2cm}}$$

$$\frac{43}{9} = \underline{\hspace{2cm}}$$

Convert each mixed fraction to a improper fraction.

$$4\frac{2}{7} = \underline{\hspace{2cm}}$$

$$1\frac{3}{4} = \underline{\hspace{2cm}}$$

$$3\frac{1}{5} = \underline{\hspace{2cm}}$$

Write each fraction in lowest terms.

$$\frac{10}{25} = \underline{\hspace{2cm}}$$

$$\frac{15}{20} = \underline{\hspace{2cm}}$$

$$\frac{15}{24} = \underline{\hspace{2cm}}$$

Compare the fractions. Write $>$, $<$, or $=$ in the square.

$$\frac{4}{9} \square \frac{1}{6}$$

$$\frac{5}{6} \square \frac{4}{5}$$

$$\frac{6}{16} \square \frac{3}{8}$$