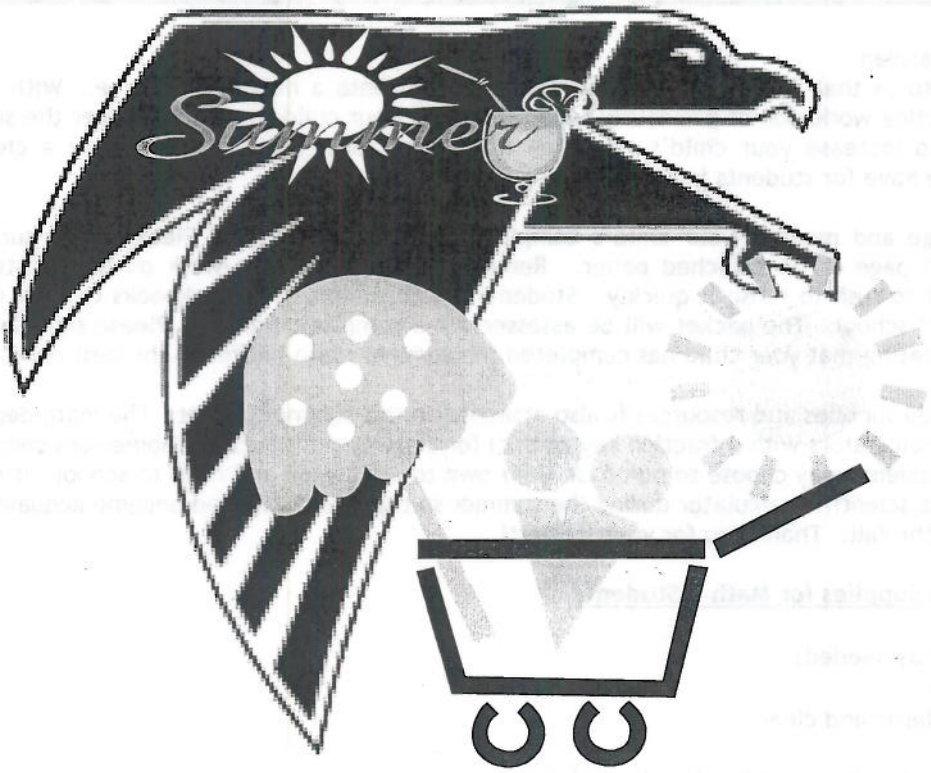
Name: _____ Date: _____

Lakelands Park Middle School



Math 6

Summer Packet

Dear Students,

Summer vacation is almost here and the start of the new school year is just around the corner. We want you to be prepared for the upcoming school year. It is important that you have a smooth transition to your new math class at the beginning of the school year. With this in mind, we are providing a practice workbook of previously taught skills for you to complete over the summer.

It is your responsibility to complete the workbook before the start of the school year. Please follow the directions for calculator use on each page. You should show all necessary work so that you and your teacher can both understand how you resolved the problems. If you have trouble on some of the information, seek assistance from a parent/guardian or other adult who may be able to assist you. We have also included some websites which may assist you in completing the workbook. Remember the goal is to work consistently throughout the summer and not to rush to finish the workbook quickly.

You will receive an answer key for the workbook upon your return from summer vacation. You will be expected to seek help from your teacher on any topics that you found challenging. You will be able to demonstrate your knowledge of these concepts on a pre-assessment which will be graded for accuracy.

We look forward to seeing you in the fall.

Sincerely,

LPMS Mathematics Department

Websites for additional support and practice:

Kahn Academy	https://www.khanacademy.org/
Xtra math	http://xtramath.org/
Learn Zillion	http://learnzillion.com/
Purple math	http://www.purplemath.com/
IXL	http://www.ixl.com/
Math is fun	http://www.mathisfun.com/

Reading and Writing Numbers

HINTS:

Place Value Chart											
9	8	1	2	3	4	•	5	6	7	8	9
100 THOUSANDS	10 THOUSANDS	THOUSANDS	HUNDREDS	TENS	ONES	Dec. Pt. AND	TENTHS	HUNDREDTHS	THOUSANDTHS	10 THOUSANDTHS	100 THOUSANDTHS

When you reach the decimal point of a problem, you do not say "point" you refer to the decimal point as "and".

Rounding General Rules:

- If the number after the underlined number is 5 - 9, round the underlined number up 1 unit.
- If the number after the underlined number is 0 - 4, keep the underlined number the same and add zeros.

EX:

Number	Written in Words	Note
6,047.05	Six thousand forty seven ***and*** five hundredths	When writing the decimal portion of a number, you find the last listed number's place value. For example, 5, the last number, is in the hundredths place. Therefore, the decimal would be "and 5 hundredths."
12.041	Twelve ***and*** Forty-One Thousandths	One, the last number, is in the thousandths place. Therefore, the decimal would be "and 41 thousandths."

1) Write the following number in words.

a) 3,784	
b) 7.16	
c) 3.005	
d) 2.141	

2) Write the number the name represents.

a) One and twelve thousandths	
b) Forty-two and seven tenths	
c) Three hundred seventy five and six ten-thousandths	
d) Five hundred thirty six thousand seven hundred six	

3) Round each number to the underlined place value.

Number	Rounded Answer
EXAMPLE: 4<u>2</u>.5	43 (The 5 tells you to round the 2 up 1 unit.)
a) 96.<u>0</u>8	
b) 8.0<u>9</u>4	
c) 3.<u>2</u>92	
d) 796.<u>8</u>4	

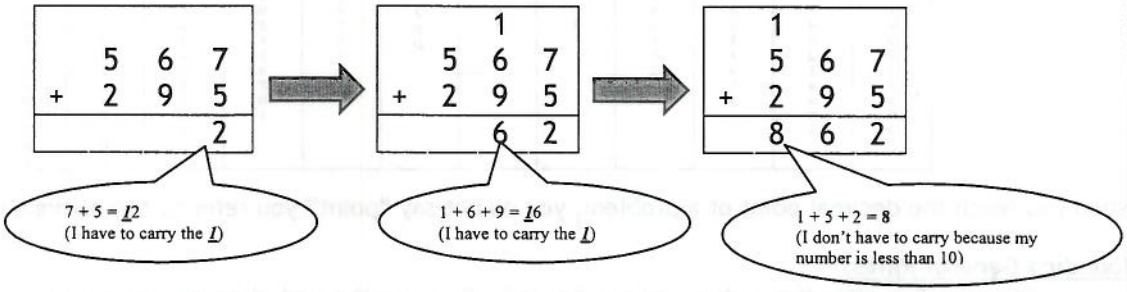
Number	Rounded Answer
EXAMPLE: 12,<u>5</u>47	12,500 (The 4 tells you to leave the 5 alone.)
e) 4<u>3</u>2,483	
f) 1,387,2<u>1</u>6	
g) <u>3</u>92,621	
h) <u>3</u>8,721,830	

Adding & Subtracting Whole Numbers

Hint: Adding Whole Numbers

Adding numbers with different places requires lining up the units column. Your problem should always be justified on the right side. The key to adding is regrouping. If a column adds up to more than ten, then the tens digit of the sum needs to be included in the next column.

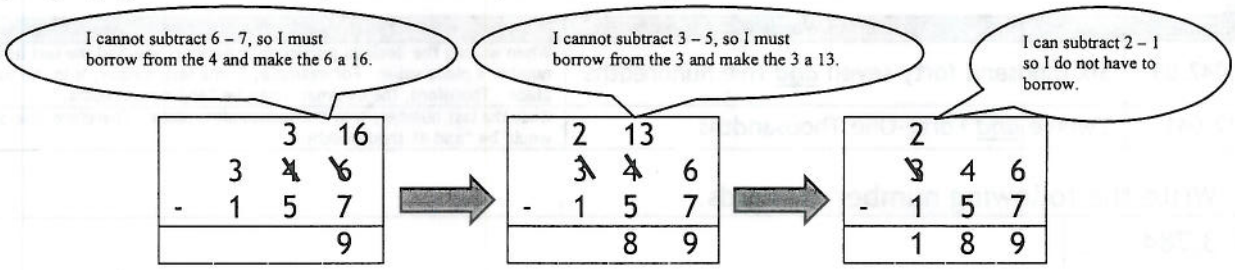
Examples:



Hints: Subtracting Whole Numbers

Subtracting numbers with different places requires lining up the units column. Your problem should always be justified on the right side. The key to adding is regrouping. If a column adds up to more than ten, then the tens digit of the sum needs to be included in the next column.

Examples:



Solve:

a)	b)	c)	d)
6 4 9 6 4 1 1 1 + 3 1 2 8	2 3 8 7 9 + 7 1 2 3	3 8 8 7 9 - 1 6 3 4 4	4 9 9 8 - 6 5 3
e) 54,398 + 64,123	f) 3,524 + 728 + 906	g) 4,223 - 2,119	h) 3,998 - 23

Mental Math: Multiplying & Dividing

On this page, you will demonstrate your ability to solve multiplication and division problems within a certain time. Have an adult time you. Write the problems and answers of any incorrect/missed problems 3 times on a separate sheet of paper.

Multiplication Problems: (5 Minutes)

1) 3 • 9 =	2) 4 • 10 =	3) 3 • 5 =	4) 4 • 6 =	5) 3 • 7 =	6) 3 • 8 =
7) 4 • 9 =	8) 6 • 4 =	9) 4 • 5 =	10) 6 • 7 =	11) 4 • 7 =	12) 4 • 8 =
13) 6 • 9 =	14) 7 • 11 =	15) 6 • 6 =	16) 7 • 12 =	17) 6 • 8 =	18) 7 • 8 =
19) 8 • 11 =	20) 8 • 9 =	21) 7 • 5 =	22) 8 • 6 =	23) 7 • 7 =	24) 8 • 8 =
25) 9 • 9 =	26) 9 • 4 =	27) 8 • 12 =	28) 9 • 6 =	29) 8 • 4 =	30) 9 • 12 =

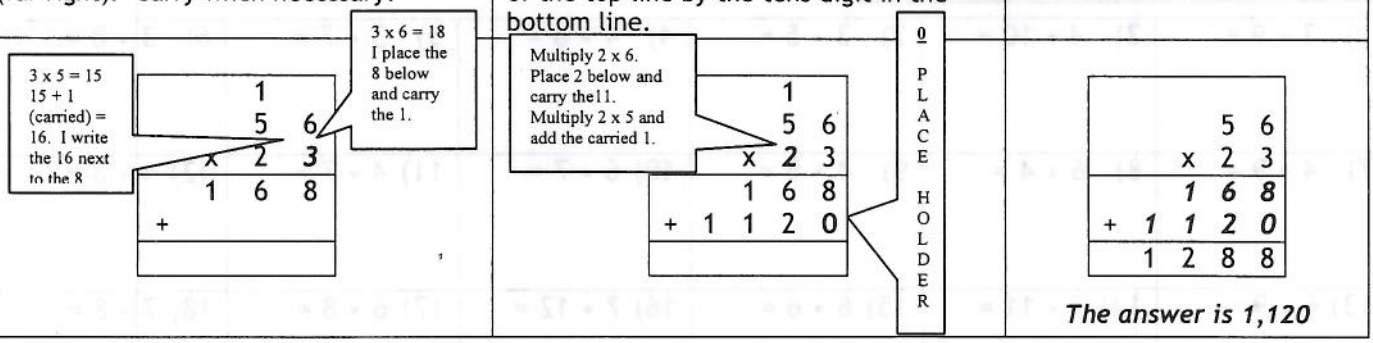
Division Problems: (5 Minutes)

1) 24 ÷ 8 =	2) 24 ÷ 6 =	3) 54 ÷ 9 =	4) 49 ÷ 7 =	5) 27 ÷ 3 =	6) 48 ÷ 6 =
7) 28 ÷ 4 =	8) 36 ÷ 9 =	9) 18 ÷ 3 =	10) 7 ÷ 7 =	11) 25 ÷ 5 =	12) 60 ÷ 12 =
13) 81 ÷ 9 =	14) 56 ÷ 7 =	15) 48 ÷ 4 =	16) 16 ÷ 8 =	17) 15 ÷ 3 =	18) 60 ÷ 6 =
19) 56 ÷ 8 =	20) 72 ÷ 8 =	21) 35 ÷ 7 =	22) 36 ÷ 3 =	23) 72 ÷ 6 =	24) 35 ÷ 7 =
25) 63 ÷ 9 =	26) 32 ÷ 8 =	27) 45 ÷ 5 =	28) 7 ÷ 1 =	29) 0 ÷ 8 =	30) 22 ÷ 11 =

Multiplying Whole Numbers

Hints:

Step #1	Step #2	Step #3
Line up the numbers vertically (right justified). Multiply each digit in the top line by the ones digit in the bottom line (far right). Carry when necessary.	Write a 0 under the last term you multiplied by (3 in the example) as a place holder. Then multiply each digit of the top line by the tens digit in the bottom line.	Add the numbers together. Carry when necessary.



Try these: (Show all work. Use lined paper if necessary.)

a) $\begin{array}{r} 659 \\ \times\ \ 7 \\ \hline \end{array}$	b) $\begin{array}{r} 45 \\ \times\ 19 \\ \hline \end{array}$	c) $\begin{array}{r} 16 \\ \times\ 84 \\ \hline \end{array}$
d) 48 • 56 =	e) 64 • 33 =	f) 26 • 38 =
g) 81(40) =	h) 30 x 63 =	i) (14) (17) =

Note: *All of the problems listed above are multiplication problems. You will see multiplication written in many different ways next year!*

Understanding Fractions

For each fraction, draw a model.

a) $\frac{8}{20}$	b) $\frac{1}{6}$	c) $\frac{5}{7}$	d) $\frac{5}{9}$

Hints:

Steps:
1) Add or subtract the numerators (top numbers)
2) Use the same denominator as the answer denominator.

NOTE:
- Simplify your answer when necessary.
- Turn all improper fractions into mixed numbers.

EX:

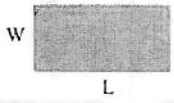
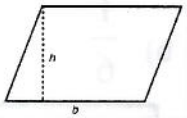
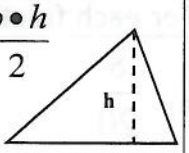
ADDING $\frac{6}{8}+\frac{3}{8}=\frac{6+3}{8}=\frac{9}{8}=1\frac{1}{8}$

Subtracting $\frac{11}{15}-\frac{6}{15}=\frac{5}{15}=\frac{5\div5}{15\div5}=\frac{1}{3}$

Simplify. Write in lowest terms.

a) $\frac{3}{20}-\frac{1}{20}$	b) $\frac{6}{15}+\frac{4}{15}$	c) $\frac{3}{4}+\frac{3}{4}$
g) $\frac{7}{14}-\frac{3}{14}$	h) $\frac{1}{4}+\frac{1}{4}$	i) $\frac{14}{19}-\frac{5}{19}$

Area and Perimeter

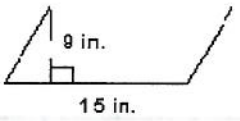
Perimeter	Area of a Square	Area of a Rectangle	Area of a Parallelogram	Area of a Triangle
Add up the lengths of all sides	$A = s^2$ 	$A = l \cdot w$ 	$A = b \cdot h$ 	$A = \frac{b \cdot h}{2}$ 

To find the area of a shape, follow the steps below.

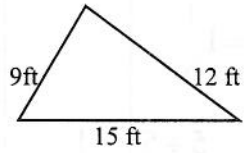
1) Write the formula.
2) Substitute the letters with numbers
3) Solve.

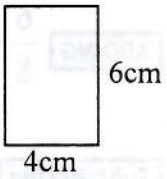
Example: Parallelogram

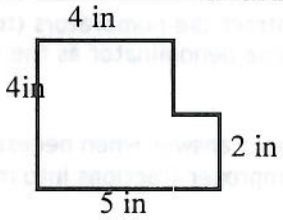
$A = b \cdot h$
$A = 15 \cdot 9$
$A = 135 \text{ in}^2$



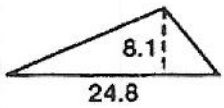
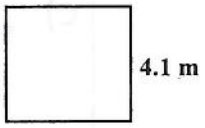
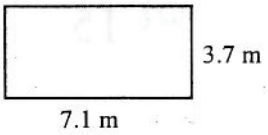
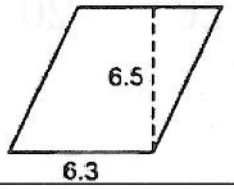
1) Find the perimeter.







2) Find the area. Show the three steps to solve.

a)	b)	c)	d)
			
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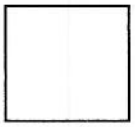
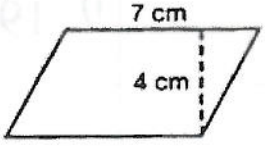
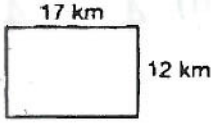
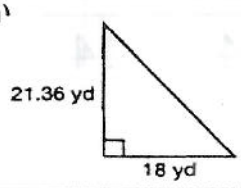
A =	A =	A =	A =
A =	A =	A =	A =

e)	f)	g)	h)
			
A =	A =	A =	A =
A =	A =	A =	A =
A =	A =	A =	A =

Reading and Creating Graphs

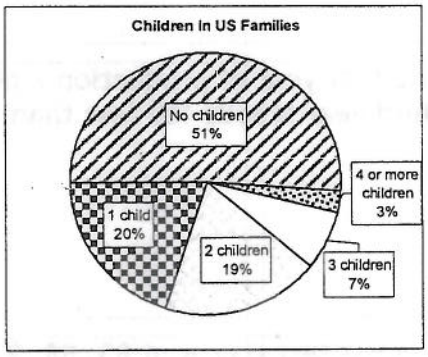
Use the Disney Park Attendance pictograph to answer questions 1 - 5.

Disney Park Attendance, 1993	
Disneyland	
EPCOT (at Disneyworld)	
Magic Kingdom (at Disneyworld)	
Hollywood Studios (at Disneyworld)	
= 1 million visitors	

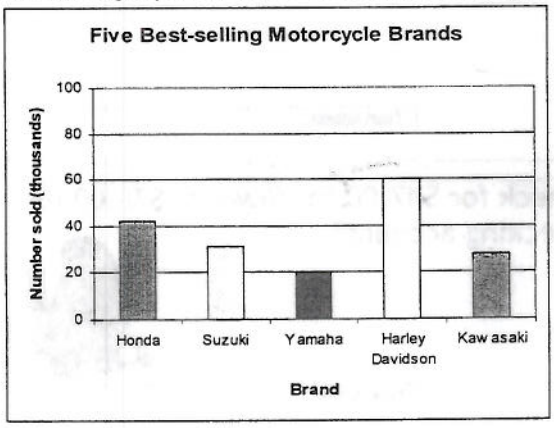
1) Which park had the fewest visitors?	
2) Which park had the most visitors?	
3) How many more people visited EPCOT than Hollywood Studios?	
4) Which park had fewer visitors? Magic Kingdom or EPCOT?	
5) What is the total number of visitors to the four parks?	

Use the Children in US Families graph to answer questions 6 - 7.

6) What percent of families have 1 child or less?	
7) What percent of families have more than 2 children?	



Use the graph of the Five Best-selling Motorcycle Brands to answer questions 8 - 10.



8) Which brand sold the fewest motorcycles?	
9) About how many Hondas were sold?	
10) How many more Harley Davidson motorcycles were sold than Yamaha motorcycles?	

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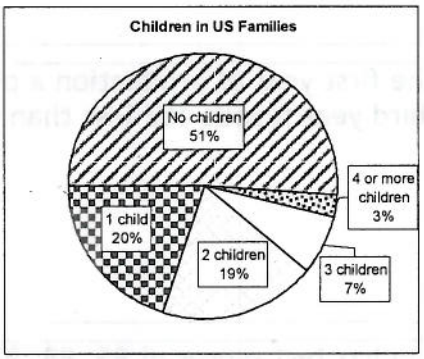

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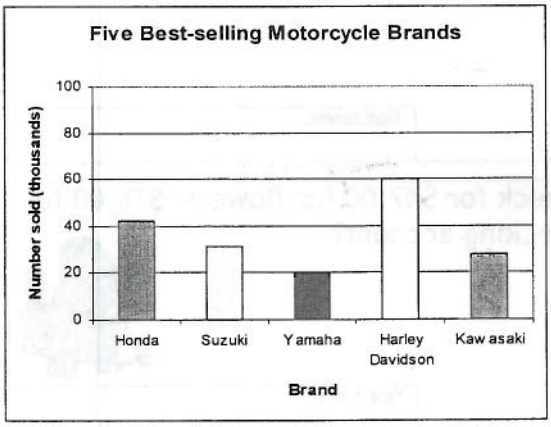

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Application problems

1. Several expressions are shown. Decide if the value of the expression is less than, equal to, or greater than 15. Write the expressions in the corresponding column of the table.

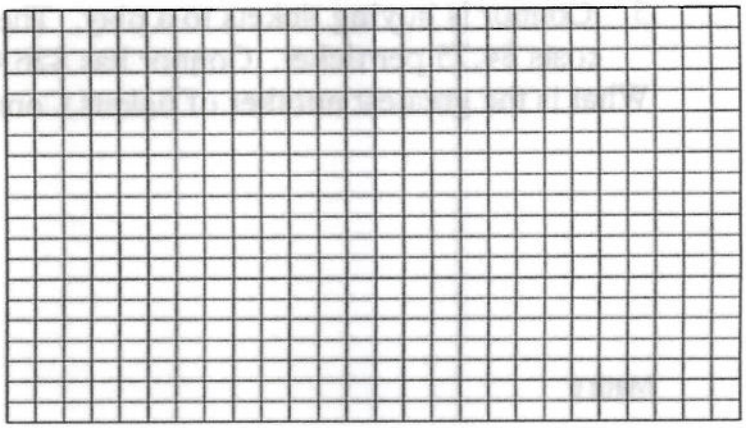
Less than 15	Equal to 15	Greater than 15

$2 \times \frac{1}{2} \times (5 \times 3)$ $\quad (5 \times 3) \div 5$ $\quad \frac{1}{4} \times (5 \times 3)$

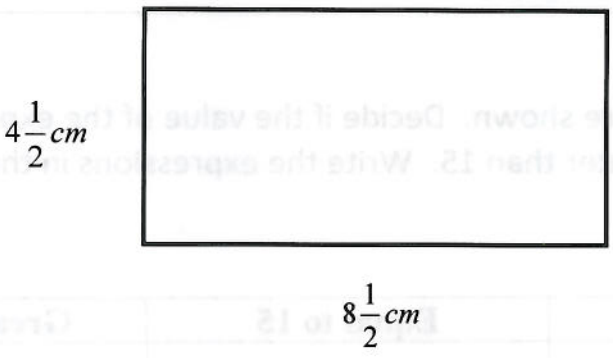
$(5 \times 3) + 6$ $\quad 20 - (5 \times 3)$ $\quad (5 \times 3) \times (8 - 7)$

$1 \times (5 \times 3)$ $\quad 2 \times (5 \times 3)$

2. Each square in the grid represents 25 units. Draw a rectangle that has an area of 875 square units.



3. Look at the rectangle



What is the area of the rectangle in square centimeters?

4. At Maria's school, 6 classes are going on a field trip. Each class has 26 students and 1 teacher. Each bus holds a maximum of 48 people. The school requests 3 buses for the field trip.

Read Maria's argument below. Circle the statement in Maria's argument that has incorrect reasoning or inaccurate calculations.
Then correct the statement.

a. Maria says that 3 buses are not enough.

b. She argues that 3 buses will hold a maximum of 144 people.

c. The classes need space for 156 people.

d. The school needs to order 1 more bus.

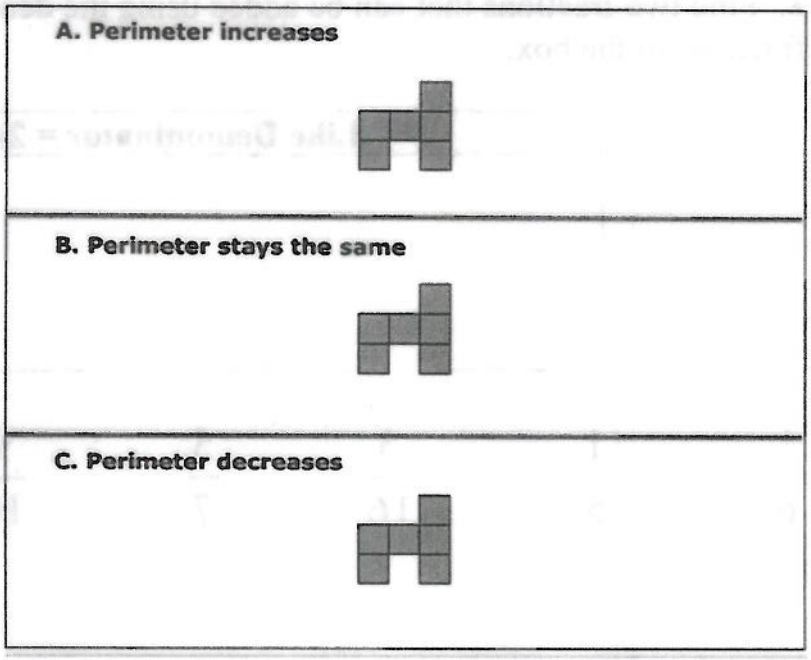
5. Connor is buying tickets to a play. The play he and his friends want to see costs $4.75 per ticket. Connor has $26.00 in his pocket.
What is the greatest number of tickets Connor can buy?

6.

A. Add a square so that the perimeter increases

B. Add a square so that the perimeter stays the same.

C. Add a square so that the perimeter decreases.



7. Show two different ways to complete the multiplication problem.

$$\begin{array}{r} 4\square \\ \times\ 5\ 6 \\ \hline 2\square\square 2 \end{array}$$

$$\begin{array}{r} 4\square \\ \times\ 5\ 6 \\ \hline 2\square\square 2 \end{array}$$

8. Find two fractions that can be added using the denominator 24. Write those two fractions in the box.

Like Denominator = 24

$\frac{1}{6}$ $\frac{1}{5}$ $\frac{3}{16}$ $\frac{5}{7}$ $\frac{9}{10}$ $\frac{1}{9}$ $\frac{7}{8}$