IS 73 – Frank Sansivieri Intermediate School

Summer Math Activities

For Students Entering Grade 6

Name: _____

Parent Signature: _____

June 2015

Dear Parents,

Attached please find a summer math review packet. We strongly encourage your child to complete this review, as we feel it will be invaluable in insuring his/her successful transition to sixth grade math. Below you will find a calendar of activities for the months of July and August. Each week has a theme which the students will work on. They should be able to complete this work in two sessions. Please initial the calendar for the days that your student worked on the math.

Included within this packet you will find a variety of websites and math videos that your child may want to visit over the summer. These sites are filled with games and basic fact skills your child is sure to enjoy. All web sites were checked at the time of this printing but parents should be sure to monitor their student's internet usage in case of changes in the content. Fact reinforcement is a key factor in the natural flow of mathematics. Please help your child to review their times tables through 12 in order to build a strong foundation for their middle school math career.

Thank you for your support of the math program. We wish you a happy and safe summer vacation.

Sincerely,
6th Grade Math Teachers

July 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
Divisibility Rules Week						
12	13	14	15	16	17	18
Simplifying Fractions Week						
19	20	21	22	23	24	25
Basic Operations Week						
26	27	28	29	30	31	Notes:
Common Denominators Week						

August 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
Comparing Fractions Week						
9	10	11	12	13	14	15
Adding & Subtracting Fractions Week						
16	17	18	19	20	21	22
Estimation Week						
23	24	25	26	27	28	29
Coordinate Plane Week						
30	31	1	2	3	4	5
		September				

DEAR STUDENTS: Please do your best to finish this math packet.

- You can use the internet to watch help videos and play math games.

- Start each week by completing a Math Minute activity.

- Have a parent initial the calendar for the days you worked on your packet (you should be able to finish if you work on it twice a week).

Every student who hands in a completed Math Packet by Friday, September 11th will receive a Math Homework Pass.

Have a great summer!
-Your 6th Grade Math Teacher

July 5th – July 11th   -   Divisibility Rules

MINUTE 1

NAME _____

1. 6 x 3 =

2. How many ears do eight dogs have in all? _____

3. If $n + 2 = 7$, then $n =$

4. There were eight bugs on the ground. Now there are six. How many flew away? _____

5. 2 x 3 x 2 =

6. 4 x 6 + _____ = 31

7. 3, 6, 9, 12, _____, _____, _____

8. Seven bicycles have _____ wheels in all.

Use <, >, or = to complete questions 9 and 10.

9. 3 weeks _____ 20 days

10. 1 cm _____ 1 in.

Dividing by 2	The last digit is even (0,2,4,6,8)
Dividing by 5	The last digit is 0 or 5
Dividing by 10	The last digit is 0

_____

Dividing by 3	The sum of the digits is divisible by 3
	Example: 132
	1+3+2= 6
	Yes, 6 is divisible by 3.
	132 is divisible by 3.
Dividing by 9	The sum of the digits is divisible by 9

_____

Dividing by 4	The last **two** digits are divisible by 4
	Example: 132
	32 are the last two digits.
	32 is divisible by 4.
	132 is divisible by 4.
Dividing by 8	The last **three** digits are divisible by 8.

_____

Dividing by 6	The number is divisible by both 2 *and* 3
Dividing by 12	The number is divisible by both 3 *and* 4

Instructional Video	**Computer Math Games**
http://mathatube.com/divisibility-rules.html Scroll down to the second video on this site. It is the better video. The instructor will walk you through the divisibility with examples.	http://www.aaamath.com/div.htm#topic24 Scroll down to the yellow box that says "Play". Select the "20 Questions" button. Scroll to the blue box that says "Practice" and Hit Start.
Worksheet	Fill in the grid with "yes" or "no" to indicate if a number in the row is divisible by the numbers at the top of the columns.

Is the Number to the left of each row divisible by the Number
at top of each column?   Write YES or NO in each box.

	2	3	4	5	6	9
2898						
2280						
1640						
4590						
2568						
3795						
1122						
2796						
1848						
3100						
4025						
2410						

MINUTE 2

NAME _____

1. $3 \cdot 5 =$

2. Four dollars equal _____ pennies.

3. $2 + 5 \cdot 2 =$

4. $5 + 8 - 3 =$

5. $\dfrac{6}{2} =$

6. 0, 4, 8, 12, _____, _____, _____

7. $0 \times 5,132 =$

8. $2\overline{)32}$

9. The product of four and three is _____.

10. The sum of five and four is _____.

Simplifying Fractions

*To simplify a fraction, divide the top and bottom by the **highest number** that can divide into both numbers exactly.*

Simplifying Fractions

Simplifying (or *reducing*) fractions means to make the fraction as simple as possible. Why say four-eighths ($^4/_8$) when you really mean half ($^1/_2$) ?

$^4/_8$ $^2/_4$ $^1/_2$
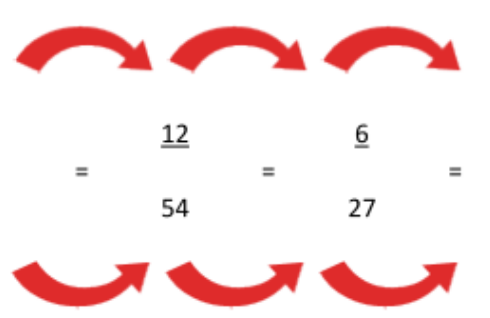
(Four-Eighths)   (Two-Quarters)   (One-Half)

EXAMPLES:

$\div 2$ $\div 2$ $\div 3$

$\dfrac{24}{108} = \dfrac{12}{54} = \dfrac{6}{27} = \dfrac{2}{9}$

$\div 2$ $\div 2$ $\div 3$

Instructional Video

http://www.mathsisfun.com/simplifying-fractions.html

Click on the little movie icon.

Worksheet

1. Color by number: get out your crayons!
2. Practice simplifying fractions.

Computer Math Game (4)

http://www.iboard.co.uk/iwb/Simplifying-Fractions-Game-366

http://www.math-play.com/simplifying-fractions-game/simplifying-fractions-game.html

http://www.bbc.co.uk/skillswise/game/ma17frac-game-simplifying-fractions

http://www.sheppardsoftware.com/mathgames/fractions/reduce_fractions_shoot.htm

Color by Fraction – Equivalent Fractions

$\frac{3}{6} = \frac{1}{2}$

Color all fractions that are equivalent to 1/2 yellow
Color all fractions that are equivalent to 1/3 green
Color all fractions that are equivalent to 2/3 red
Color all fractions that are equivalent to 3/4 blue
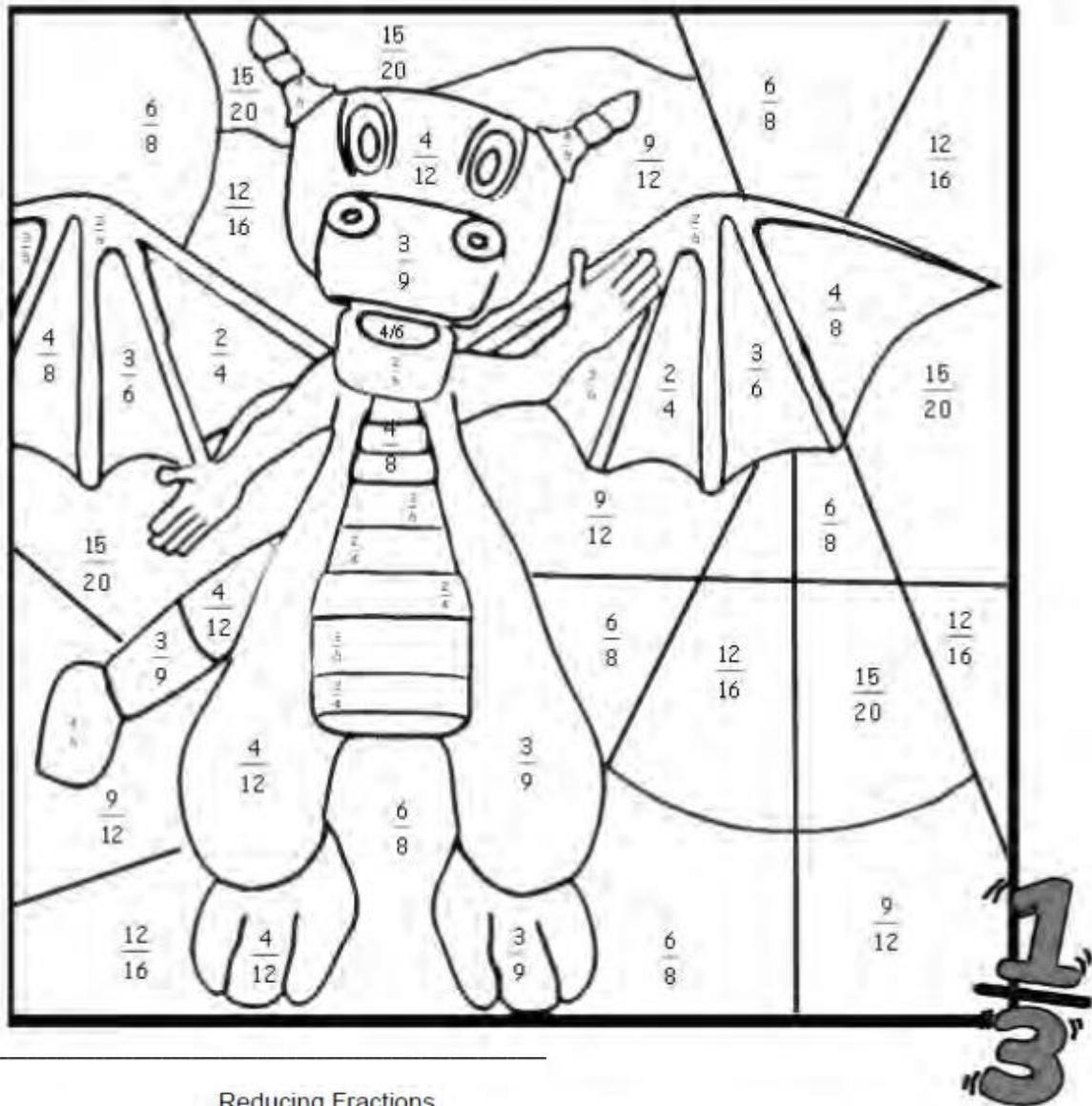
_____

Reducing Fractions

1) $\frac{24}{42} =$ ____

2) $\frac{21}{77} =$ ____

3) $\frac{7}{21} =$ ____

4) $\frac{50}{60} =$ ____

5) $\frac{21}{70} =$ ____

6) $\frac{18}{36} =$ ____

7) $\frac{12}{72} =$ ____

8) $\frac{100}{110} =$ ____

9) $\frac{3}{18} =$ ____

10) $\frac{14}{21} =$ ____

11) $\frac{4}{8} =$ ____

12) $\frac{2}{24} =$ ____

MINUTE 3

NAME _____

1. The product of 4 and 6 is _____.

2. 2,463 x 0 =

3. 1, 10, 2, 9, 3, _____, _____, _____

4. $\frac{8}{4}$ =

5. 4)48

6. 8 + 6 ÷ 3 =

7. 3 + 4 • 3 =

8. How much does each apple cost? _____

Apples
4 for $2

9. 5 + (3 – 1) =

10. The difference between 9 and 5 is _____.

Instructional Video	Worksheet	Computer Math Games
http://www.mathatube.com/decimal-multiply-decimals.html http://www.mathatube.com/decimal-dividing-decimal.html	Solve the following worksheets	http://www.aaamath.com/mul54ax2.htm http://www.aaamath.com/div56bx2.htm Scroll down to the yellow box that says "Play".

Multiply Decimals

You multiply decimals the same way you multiply whole numbers.

Once you get the product, you will need to decide where to place the decimal point.

To do this, count the number of places to the right of the decimal point in each factor and total them. Look at your product, start from the right, and count back that many places. Place your decimal point there.

EXAMPLE

```
    4.5    There is one place after the decimal point.
  × 3.4    There is one place after the decimal point.
    180
 + 1350
  15.30    Starting from the right count back two places.
           Put the decimal point there. The product is 15.3.
```

Find the products.

1
```
    3.8
  × 0.2
```

2
```
   4.76
  × 4.9
```

3
```
   76.4
  × 23
```

4
```
   78.4
  × 46
```

5
```
    1.2
  × 0.7
```

6
```
    326
  × 4.9
```

7
```
  5.076
  ×    8
```

8
```
   0.65
  × 27
```

Write the problems vertically before solving.

9 4.5×8.7

10 65×9.3

Divide a Decimal by a Whole Number

When dividing a decimal by a whole number bring up the decimal point in the quotient before you begin to divide.

Divide as you would a whole number. However, there are **no remainders.** If you get a remainder, **attach a zero to the dividend,** bring it down and continue to divide.

STEP 1:

```
     .
4)23.4
```

STEP 2:

```
    5.8
4)23.4
 -20
    3 4
    3 2
      2
```

STEP 3:

```
    5.85
4)23.40
 -20
    3 4
    3 2
      20
    - 20
       0
```

Divide.

1 3)57.3

2 2)6.9

3 6)48.6

4 2)4.3

5 5)5.44

6 8)18.6

7 8)56.3

8 17)10.54

July 26th – August 1st - Common Denominators

MINUTE 4

NAME _____

1. 1, 5, 9, 13, _____, _____, _____

2. $10 - 4 \cdot 2 =$

3. $\frac{18}{3} =$

4. $84 \div 1 =$

5. Does Ellen spend more time on homework or sports? _____

6. $4 \cdot 3 + 5 \cdot 1 =$

For questions 7–10, use $a = 2$, $b = 3$, and $c = 6$.

7. $a + b =$

8. $ac =$

9. $\frac{c}{a} =$

10. $2b =$

What is a Common Denominator?

"Common" Denominator just means that the denominators in two (or more) fractions are common, or **the same**.

$$\frac{2}{5} + \frac{1}{5}$$

numerators

denominators

These denominators are common (the same)
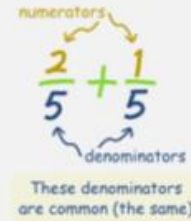
Why is it Important?

Adding and Subtracting Fractions

Before you can <u>add</u> or <u>subtract</u> fractions, the fractions need to have a **common** denominator (in other words the denominators **must be the same**).

Three Ways to Find the Common Denominator:

1. See if the smaller denominator can go into the larger one--if it works use the larger one as your denominator!

2. Multiply the two denominators-- use your answer as the new denominator

3. Find the smallest common multiple(LCM)--ask yourself what is the smallest number they both will go into

$$\frac{3}{4} = \frac{}{}$$

$$\frac{2}{8} = \frac{}{}$$

Instructional Video	**Worksheet**
Watch this video. It is very helpful. http://www.youtube.com/watch?v=-I37jui1PVQ (Please ask your parents for permission to use Youtube.)	Find the Least Common Denominator and fill it in the box.

When adding or subtracting fractions with unlike denominators, the students must first find the Least Common Denominator. Find the Least Common Denominator for the following fractions and fill in the box.

$\dfrac{1}{3}$ & $\dfrac{1}{9}$ □

$\dfrac{1}{12}$ & $\dfrac{1}{3}$ □

$\dfrac{1}{2}$ & $\dfrac{1}{10}$ □

$\dfrac{1}{3}$ & $\dfrac{1}{8}$ □

$\dfrac{1}{6}$ & $\dfrac{1}{4}$ □

$\dfrac{1}{5}$ & $\dfrac{1}{6}$ □

$\dfrac{1}{8}$ & $\dfrac{1}{4}$ □

$\dfrac{1}{8}$ & $\dfrac{1}{5}$ □

$\dfrac{1}{9}$ & $\dfrac{1}{4}$ □

$\dfrac{1}{2}$ & $\dfrac{1}{4}$ □

$\dfrac{1}{10}$ & $\dfrac{1}{5}$ □

$\dfrac{1}{3}$ & $\dfrac{1}{12}$ □

$\dfrac{1}{5}$ & $\dfrac{1}{3}$ □

$\dfrac{1}{4}$ & $\dfrac{1}{8}$ □

$\dfrac{1}{5}$ & $\dfrac{1}{4}$ □

$\dfrac{1}{10}$ & $\dfrac{1}{15}$ □

$\dfrac{1}{10}$ & $\dfrac{1}{4}$ □

$\dfrac{1}{10}$ & $\dfrac{1}{20}$ □

$\dfrac{1}{3}$ & $\dfrac{1}{6}$ □

$\dfrac{1}{3}$ & $\dfrac{1}{21}$ □

$\dfrac{1}{7}$ & $\dfrac{1}{2}$ □

$\dfrac{1}{7}$ & $\dfrac{1}{14}$ □

$\dfrac{1}{6}$ & $\dfrac{1}{9}$ □

$\dfrac{1}{6}$ & $\dfrac{1}{16}$ □

Comparing Fractions

A. Compare using a number line.
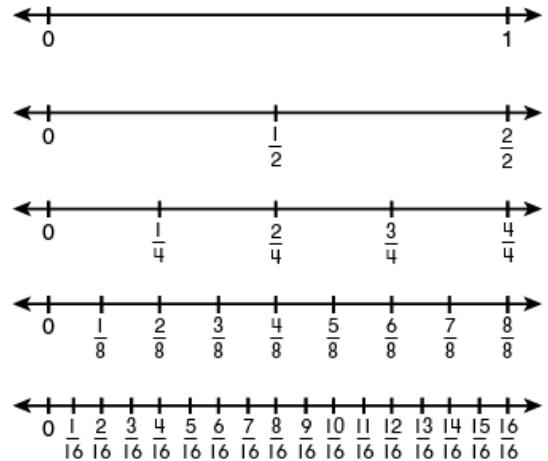
B. Same Denominator Method

If two fractions have the same denominator, then they are easy to compare.

Example: Which is larger: $^3/_8$ or $^5/_{12}$?

If you multiply 8 x 3 you get 24, and if you multiply 12 x 2 you also get 24, so let's try that (important: what you do to the bottom, you must also do to the top):

It is now easy to see that $^9/_{24}$ is smaller than $^{10}/_{24}$, (because 9 is smaller than 10).

➜ so $^5/_{12}$ is the larger fraction.

MINUTE 5

NAME _____

For questions 1–5, use $a = 8$, $b = 2$, and $c = \frac{1}{2}$.

1. $a + b =$

2. $b + c =$

3. $ab =$

4. $ca =$

5. $4a =$

6. $\dfrac{14}{2} =$

7. 1, 2, 4, 8, _____, _____, _____

8. The <u>sum</u> of 8 and 7 is _____.

9. The <u>difference</u> between 9 and 3 is _____.

10. $10 - 3 \cdot 3 =$

Instructional Video	Worksheet	Computer Math Games
http://www.virtualnerd.com/middle-math/number-theory-fractions/comparing-ordering/compare-fractions-find-common-denominator	Solve the following worksheets	http://www.learnalberta.ca/content/mejhm/index.html?ID1=AB.MATH.JR.NUMB&ID2=AB.MATH.JR.NUMB.FRA&lesson=html/video_interactives/fractions/fractionsSmall.html (watch video and then click interactive) http://www.bbc.co.uk/skillswise/game/ma17frac-game-dolphin-racing-fractions

9) Which fraction has the least value?

10) Which fraction has the greatest value?

$$^{11}/_{12} =$$

$$^{2}/_{10} =$$

$$^{7}/_{8} =$$

$$^{4}/_{10} =$$
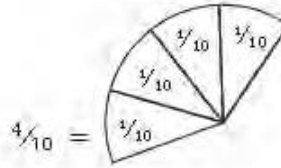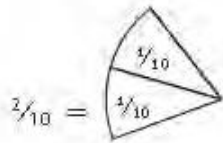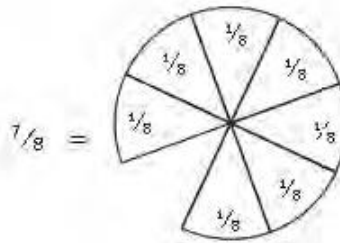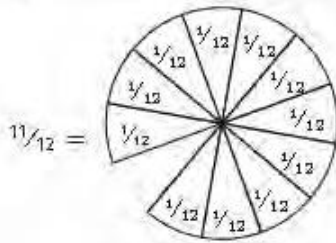
Order the fractions from smallest to greatest.

1a. $\dfrac{12}{11}, \dfrac{3}{5}, \dfrac{8}{1}, \dfrac{10}{10}$		**1b.** $\dfrac{2}{11}, \dfrac{6}{3}, \dfrac{2}{10}, \dfrac{2}{8}$
2a. $\dfrac{10}{2}, \dfrac{10}{3}, \dfrac{1}{12}, \dfrac{2}{1}$		**2b.** $\dfrac{9}{5}, \dfrac{6}{6}, \dfrac{3}{2}, \dfrac{1}{10}$
3a. $\dfrac{12}{6}, \dfrac{12}{3}, \dfrac{12}{2}, \dfrac{12}{5}$		**3b.** $\dfrac{4}{3}, \dfrac{1}{2}, \dfrac{11}{5}, \dfrac{12}{7}$

August 9th – August 15th - Adding & Subtracting

MINUTE 6

NAME _____

1. $4 \cdot 4 =$

2. $5^2 =$

3. $2 \cdot 2 \cdot 2 =$

4. Which number is in both A and B? _____

5. $10 - 5 \cdot 2 =$

6. $6^2 =$

7. $1 \cdot 1 \cdot 1 \cdot 1 =$

8. $\frac{10}{5} =$

9. Circle the answer that is equal to $5 \cdot 5 \cdot 5$:
   a. 5 x 3   b. 3 x 5   c. 5^3 d. 3^5

10. $3 + 5 =$

(Venn diagram: Circle A contains 3, overlap contains 11, Circle B contains 9)

Adding & Subtracting

There are 3 Simple Steps to add or subtract fractions:

1. Make sure the bottom numbers (the denominators) are the same

2. Add or subtract the top numbers (the numerators), put the answer over the denominator.

3. Simplify the fraction (if needed).

Example:

$$\frac{1}{3} + \frac{1}{4} = \frac{?}{?}$$

First make the bottom numbers (the denominators) the same.

$$\frac{1 \times 4}{3 \times 4} + \frac{1 \times 3}{4 \times 3} = \frac{?}{?}$$

Now do the calculations:

$$\frac{4}{12} + \frac{3}{12} = \frac{4+3}{12} = \frac{7}{12}$$

Instructional Video	Computer Math Games
http://www.mathplayground.com/howto_fractions_diffden.html	http://www.learnalberta.ca/content/mejhm/index.html?ID1=AB.MATH.JR.NUMB&ID2=AB.MATH.JR.NUMB.FRA&lesson=html/video_interactives/fractions/fractionsSmall.html
Worksheet	(watch video and then click interactive)
Solve the following worksheets	http://www.bbc.co.uk/skillswise/game/ma17frac-game-dolphin-racing-fractions

1) $\dfrac{1}{3} + \dfrac{1}{6} = \dfrac{}{6} + \dfrac{1}{6} = \dfrac{}{6}$

2) $\dfrac{1}{4} + \dfrac{5}{12} = \dfrac{}{12} + \dfrac{5}{12} = \dfrac{}{12}$

3) $\dfrac{2}{5} + \dfrac{4}{15} = \dfrac{}{15} + \dfrac{4}{15} = \dfrac{}{15}$

4) $\dfrac{1}{2} + \dfrac{3}{8} = \dfrac{}{8} + \dfrac{3}{8} = \dfrac{}{8}$

5) $\dfrac{2}{7} + \dfrac{5}{14} = \dfrac{}{14} + \dfrac{5}{14} = \dfrac{}{14}$

6) $\dfrac{1}{4} + \dfrac{5}{16} = \dfrac{}{16} + \dfrac{5}{16} = \dfrac{}{16}$

Why did the clock go to the vet?

Subtract.
Solve the riddle using your answers below.

$\dfrac{2}{3} - \dfrac{1}{6} = \underline{\hspace{1cm}}$ **D**

$\dfrac{3}{4} - \dfrac{1}{12} = \underline{\hspace{1cm}}$ **I**

$\dfrac{1}{2} - \dfrac{1}{4} = \underline{\hspace{1cm}}$ **H**

$\dfrac{9}{10} - \dfrac{1}{2} = \underline{\hspace{1cm}}$ **K**

$\dfrac{6}{12} - \dfrac{1}{3} = \underline{\hspace{1cm}}$ **C**

$\dfrac{5}{8} - \dfrac{1}{2} = \underline{\hspace{1cm}}$ **A**

$\dfrac{4}{5} - \dfrac{3}{15} = \underline{\hspace{1cm}}$ **E**

$\dfrac{2}{3} - \dfrac{1}{12} = \underline{\hspace{1cm}}$ **P**

$\dfrac{2}{5} - \dfrac{2}{10} = \underline{\hspace{1cm}}$ **T**

$\dfrac{2}{3} - \dfrac{2}{9} = \underline{\hspace{1cm}}$ **S**

Solve the Riddle!   Write the letter that goes with each answer.

$\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$ $\underline{\hspace{0.6cm}}$

$\dfrac{8}{12}$ $\dfrac{2}{10}$ $\dfrac{1}{4}$ $\dfrac{1}{8}$ $\dfrac{3}{6}$ $\dfrac{2}{10}$ $\dfrac{8}{12}$ $\dfrac{2}{12}$ $\dfrac{4}{10}$ $\dfrac{4}{9}$

Planet Fractions

Fractions must have a common denominator in order to be added together.

Add. Reduce to lowest terms.

$\dfrac{2}{7}$
$+\dfrac{4}{14}$

$\dfrac{1}{8}$
$+\dfrac{3}{16}$

$\dfrac{1}{3}$
$+\dfrac{1}{15}$

$\dfrac{2}{5}$
$+\dfrac{3}{15}$

$\dfrac{2}{5}$
$+\dfrac{1}{10}$

$\dfrac{1}{9}$
$+\dfrac{3}{18}$

$\dfrac{1}{6}$
$+\dfrac{2}{12}$

$\dfrac{1}{2}$
$+\dfrac{2}{10}$

$\dfrac{1}{3}$
$+\dfrac{2}{9}$

$\dfrac{1}{4}$
$\dfrac{1}{4}$
$+\dfrac{3}{12}$

$+\dfrac{2}{8}$

$\dfrac{1}{5}$
$+\dfrac{6}{10}$

$\dfrac{3}{7}$
$+\dfrac{2}{14}$

$\dfrac{4}{5}$
$+\dfrac{1}{10}$

$\dfrac{1}{3}$
$+\dfrac{3}{6}$

Estimation

MINUTE 7

NAME _____

1. $8^2 =$

2. $4^2 - 6 =$

3. A trio and a quartet got together and played a song. How many musicians were there? _____

4. $2 + 3 \bullet 3 + 2 =$

5. $2\overline{)36}$

6. $10^2 =$

7. $\frac{1}{2} \bullet 10 =$

8. $3 \bullet 2 \bullet 1 =$

9. Circle the answer that is equal to 4^3:
   a. $4 \bullet 4 \bullet 4$ b. $4 \bullet 3$ c. $4 + 3$ d. $3 \bullet 3 \bullet 3 \bullet 3$

10. $\frac{4}{2} =$

Estimation is ...

... finding a number that is **close enough** to the right answer.

- You are **not** trying to get the **exact** right answer
- What you want is something that is **good enough** (usually in a hurry!)

Estimation can save you **money**. Always do a quick estimation of how much you should pay:

Example: you want to buy five magazines that cost $1.95 each. When you go to buy them the cost is $12.25. Is that right?

"five at $1.95 each is about 5 times 2, or about $10"

so $12.25 seems too much!

Ask to have the total checked.

Estimation can save you **time** (when the calculation does not have to be exact):

Example: you want to plant a row of flowers. The row is 58.3cm long. The plants should be 6cm apart. How many do you need?

"58.3 is nearly 60, and 60 divided by 6 is 10, so 10 plants should be enough."

Instructional Video	**Computer Math Games**
http://www.youtube.com/watch?v=_aJPI-Z-DFA	http://www.mathsisfun.com/numbers/estimation-game.php
Worksheet	
Solve the following worksheets	

1 Zach used $3\frac{5}{8}$ ounces of rubber cement. Which **best** describes this amount?

a) About $2\frac{1}{2}$ ounces
b) A little less than 3 ounces
c) About $3\frac{1}{2}$ ounces
d) A little more than 4 ounces

2 Mr. Glasser earned $42,859 last year. This number is **closest** to

a) $41,000
b) $42,000
c)$43,000
d) $44,000

3 A Pacific leatherback turtle weighed 704.2 kilograms. This number is **closest** to

a) 704
b) 705
c) 706
d) 707

4 A snowstorm dropped 12.87 inches of snow on Chappaqua in one day. This amount is **about**

a) 11 inches
b) 12 inches
c) 13 inches
d) 14 inches

5 The museum director made the chart below to show the attendance on Saturdays in December.

DATE	ATTENDANCE
Dec. 1	8086
Dec. 8	4299
Dec. 15	3963
Dec. 22	1042
Dec. 29	8795

About how many people attended the museum on a Saturday in December?

a) 22,000
b) 26,000
c) 29,000
d) 35,000

6 If the refrigerator is 60 inches high, **about** how tall is the stool?
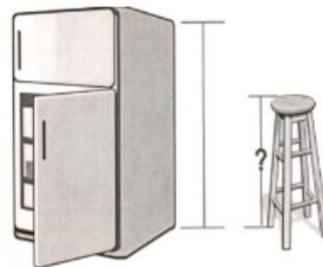
a) 10 inches
b) 25 inches
c) 40 inches
d 75 inches

7 . If the larger fish is 12 inches long, **about** how long is the smaller fish?
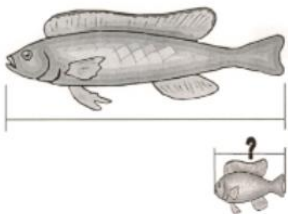
a) 15 in
b)8 in
c) 6 in
d) 3 in

8 Barbie bought $4\frac{1}{8}$ pounds of white chocolate and $3\frac{1}{6}$ pounds of milk chocolate. **About** how many pounds of chocolate is that?

a) a little less than 7
b) a little more than 7
c) a little less than 8
d) a little more than 8

August 23rd – August 29th   -   <u>Coordinate Plane</u>

MINUTE 8

NAME _____

1. $3^2 =$

2. $\dfrac{18}{3} =$

3. Circle the answer that is equal to 5^3:
  a. 5×3 b. $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3$ c. 3×5 d. $5 \cdot 5 \cdot 5$

4. If $8 + y = 15$, then $y =$

5. $15 + 3 \cdot 2 =$

6. Scott ate half of the pizza.
How many pieces did he eat? _____

7. $\begin{array}{r} 35 \\ \times\, 35 \\ \hline \end{array}$

8. $\dfrac{1}{2} \times 12 =$

For questions 9 and 10, use $a = 5$ and $b = 2$.

9. $ab =$

10. $ba =$

Coordinates can be used to pinpoint where you are on a map or graph.
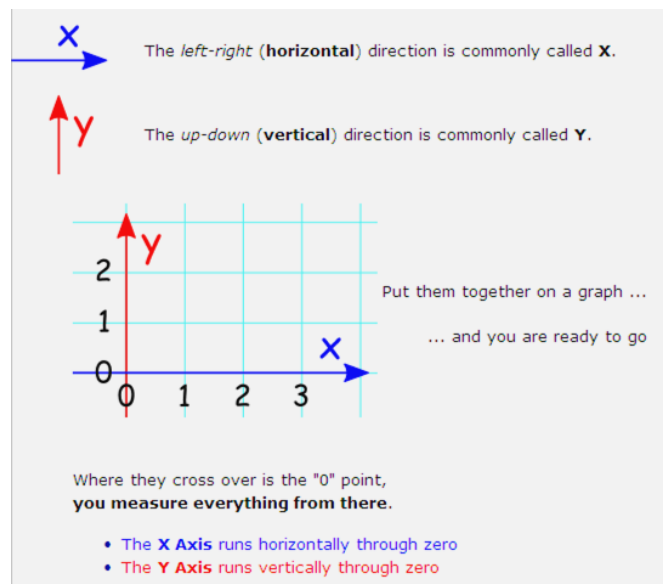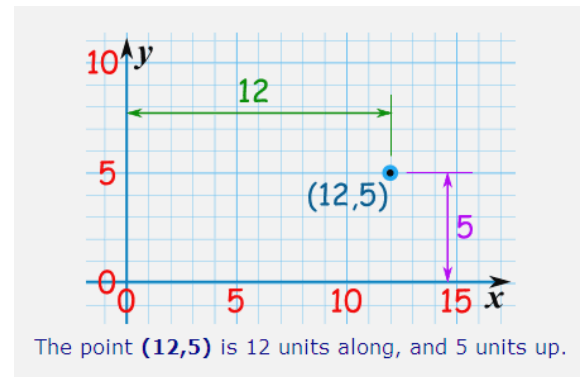
Using Coordinates you mark a point on a graph by **how far along** and **how far up** it is:

The point **(12,5)** is 12 units along, and 5 units up.

The *left-right* (**horizontal**) direction is commonly called **X**.

The *up-down* (**vertical**) direction is commonly called **Y**.

Put them together on a graph ...

... and you are ready to go

Where they cross over is the "0" point,
you measure everything from there.

- The **X Axis** runs horizontally through zero
- The **Y Axis** runs vertically through zero

Instructional Video	**Computer Math Games**
http://www.khanacademy.org/math/algebra/linear-equations-and-inequalitie/coordinate-plane/v/the-coordinate-plane	http://www.mathsisfun.com/data/click-coordinate.html
Worksheet	
Solve the following worksheets	

Why Is a Mother Kangaroo Unhappy When It Rains?

Each ordered pair at the bottom of the page represents a point on the coordinates below. Above each ordered pair, write the letter that appears at that point.
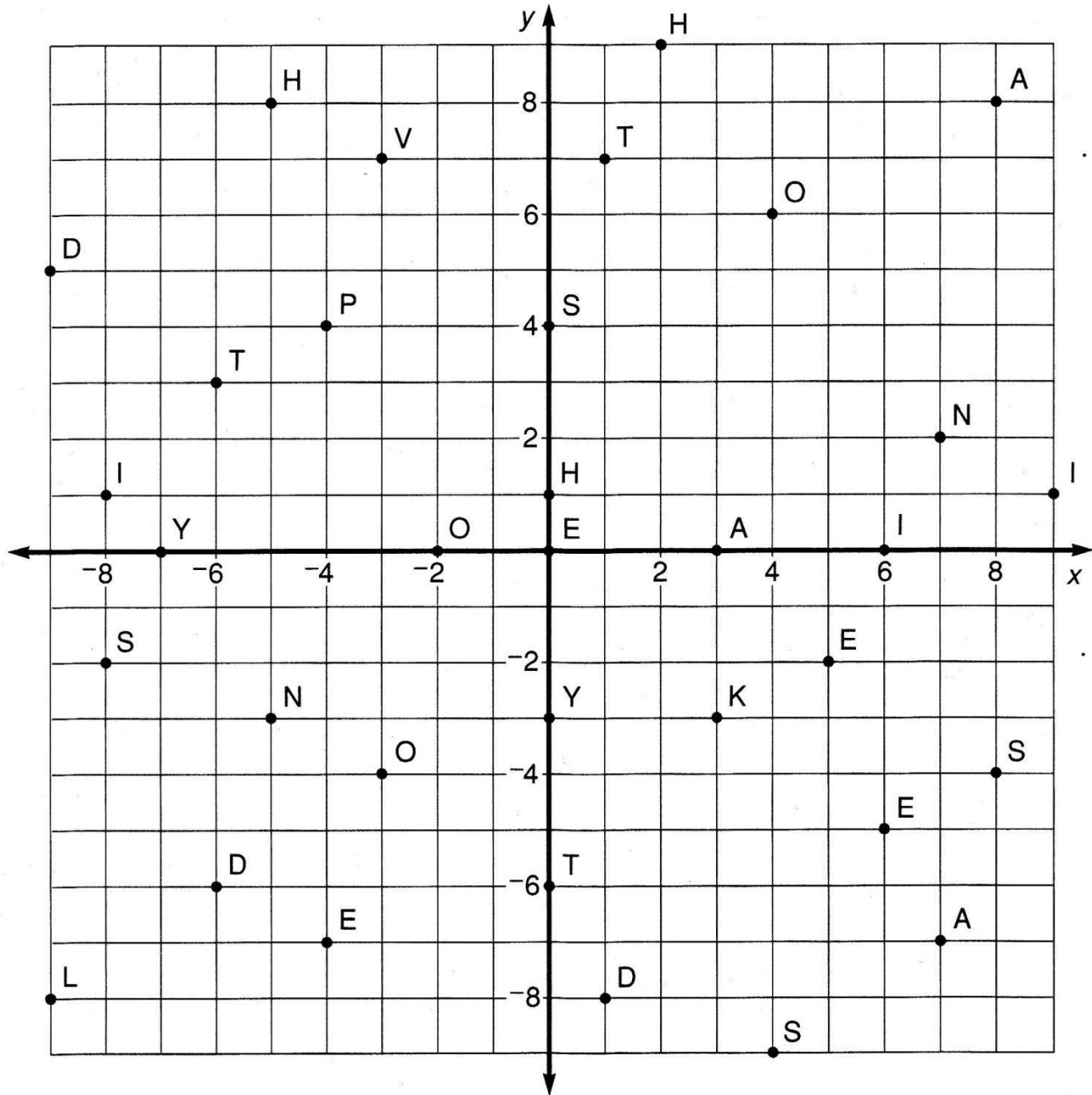
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(4,6) (7,2) (−6,3) (−5,8) (−3,−4) (−8,−2) (6,−5) (1,−8) (3,0) (−7,0) (0,4)

$\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$
(0,−6) (2,9) (−4,−7) (3,−3) (−8,1) (−6,−6) (4,−9) (0,1) (8,8) (−3,7) (5,−2)

$\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$ $\overline{\hspace{1cm}}$
(1,7) (−2,0) (−4,4) (−9,−8) (7,−7) (0,−3) (9,1) (−5,−3) (8,−4) (6,0) (−9,5) (0,0)