

Rising 6th to 7th grader,

It is important to keep your math skills sharp. The attached packet was created to not only help you review 6th grade math skills but also help make the transition to 7th grade easier. To provide the maximum benefit, it would be best to complete one page a week for 8 weeks of your choice over the course of the summer. I realize that things come up and some weeks it may not be possible to complete a page but there are more weeks in your summer than pages in this packet.

Please feel free to email me if you have questions about the content of this packet.

Have a great summer!

Mrs. Stirling

If you would like additional practice, please scan the QR codes below for additional resources:



Corresponding (linked) IXL skills for the concepts covered in this packet. You will have access to all IXL over the summer.



Math Enrichment Activities – a list of apps and websites with games and puzzles



Alcumus – an online program solving class. You will need a non-school email to sign-up (your parents can sign up for you). This uses a lot of MathCounts problems. This class will focus on pre-algebra problem solving. Fill out the form using the QR code & Mrs. Stirling will send you an invitation link.

Something different? Try the board game Prime Climb. This link will take you to the developer's website with instructions and a link to shop. It is also available from Amazon.



Complete:

Mathematician: _____

Select that statement that best matches your understanding of the material in the summer packet:

_____ I could recall with ease most of the information in the summer packet.

_____ I could recall with some review (or help) most of the information in the packet.

_____ I needed to review (or need help with) most of the mathematics in the packet.

Add, subtract, multiply or divide. Simplify if possible. Document your thinking.

1.) $\frac{1}{4} + \frac{1}{3} =$

2.) $5.34 + 8.9 =$

3.) $112.5 \div 9 =$

4.) $\frac{3}{4} \div \frac{3}{10} =$

5.) $15. - 7.9 =$

6.) $7\frac{2}{5} - 4\frac{3}{5} =$

7.) $45 \div 2 =$

8.) $\frac{5}{8} \cdot \frac{7}{10} =$

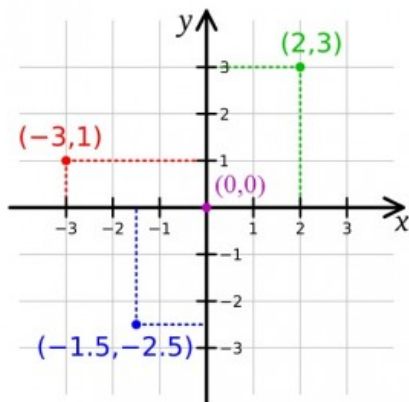
9.) $4.3 \cdot 2.9 =$

10.) Fill in the chart:

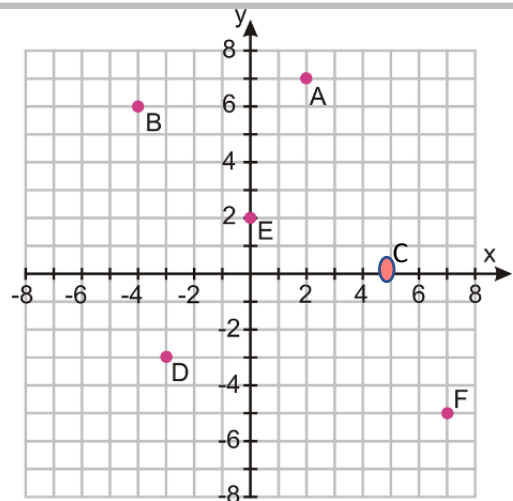
Find:	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{9}$	$\frac{1}{12}$
36						

Remember, when you graph in a coordinate plane, use ordered pairs (x,y). The first number tells you how to move on the x-axis either left or right. The second number tells you how to move on the y-axis either up or down.

For example, look at the point (-3,1).
-3 tell you to move left three from the origin (0,0) and then 1 tells you to move up one.



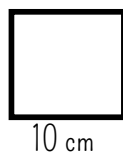
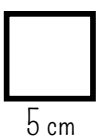
12.)



Use the coordinate plane to identify the coordinates for each point:

- A (____, ____) B (____, ____) C (____, ____)
D (____, ____) E (____, ____) F (____, ____)

Perimeter is the distance around a shape in units. Area is the amount of space inside measured in square units. Calculate the area and perimeter of each of the following squares:



What would be the perimeter of a square with an area of 49 cm^2 ?

Add, subtract, multiply or divide. Simplify if possible. Document your thinking.

1.) $\frac{2}{7} \cdot \frac{5}{8} =$

2.) $0.5 \cdot 2.8 =$

3.) $\frac{2}{3} \div \frac{3}{4} =$

4.) $5\frac{2}{3} + 3\frac{3}{4} =$

5.) $\frac{3}{8} - \frac{1}{4} =$

6.) $0.804 \div 0.2 =$

7.) $6.21 - 4.59 =$

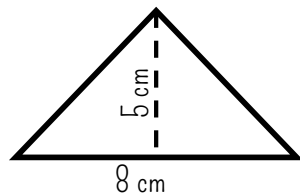
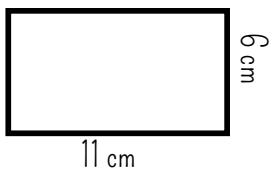
8.) $14.92 + 7.08 =$

9.) $4\frac{1}{3} - 2\frac{3}{4} =$

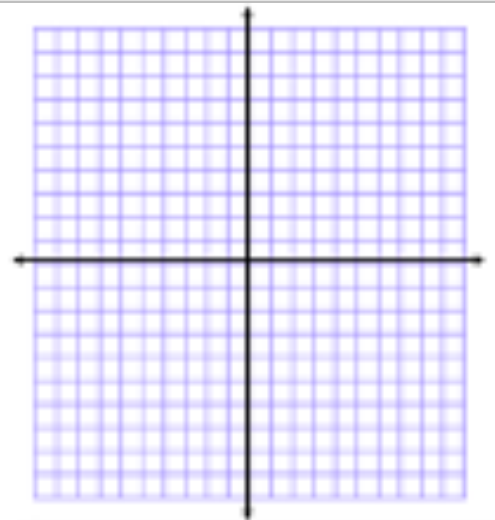
10.) Complete the table using the ratio 2 to 3.

2	4		10	16		30
3		9			30	

11.) Find the area of the following shapes (don't forget units):



12.)



13.) A candle 30 cm tall burns at a rate of 6 cm per hour. After 3 hours, how tall is the candle?

Graph & label the following ordered pairs:

A (6, -5) B(-5, -4) C(0,5) D(2,3) E(-7,3)

Bonus: At a campfire, a group of 30 students was split into group of 3. In each group, each student toasted 1 marshmallow for each of the other 2 students in the group. Altogether, how many marshmallows were toasted?

Add, subtract, multiply or divide. Simplify if possible. Document your thinking.

1.) $2\frac{1}{2} \div 1\frac{1}{3} =$

2.) $8.27 + 11 =$

3.) $\frac{4}{9} \cdot \frac{3}{8} =$

4.) $2\frac{1}{4} + 7\frac{2}{3} =$

5.) $\frac{4}{9} \div \frac{7}{9} =$

6.) $56 - 32.41 =$

7.) $40.48 \div 8 =$

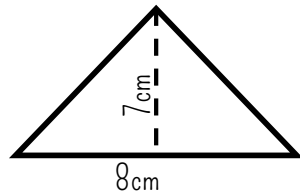
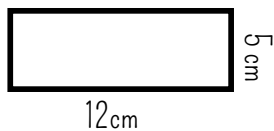
8.) $0.31 \cdot 0.206 =$

9.) $\frac{3}{5} - \frac{1}{2} =$

10.) Fill in the chart:

Find:	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{10}$	$\frac{1}{12}$	$\frac{1}{15}$
60								

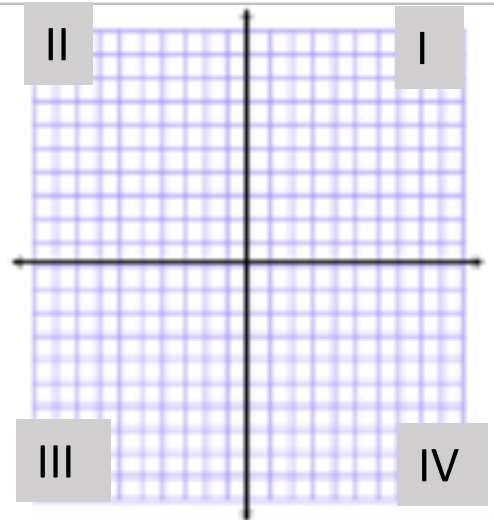
11.) Find the area of the following shapes (don't forget units):



12.)

The quadrants are labeled.

Graph a point in each quadrant and label its coordinates below:



A(_____, _____) B(_____, _____)

C(_____, _____) D(_____, _____)

13.) During a basketball game, the ratio of Joe's points to Ben's points was 5:6. If there were 33 points scored between the two, how many more points did Ben score than Joe?

Bonus: How many whole number factors of 27 are also factors of 72?

Add, subtract, multiply or divide. Simplify if possible. Document your thinking.

1.) $4\frac{2}{5} \div 2\frac{1}{5} =$

2.) $5\frac{3}{5} - 3\frac{2}{3} =$

3.) $0.3 \div 6 =$

4.) $9.1 - 3.17 =$

5.) $0.0041 \cdot 5.7 =$

6.) $2\frac{3}{4} \cdot 5\frac{1}{2} =$

7.) $3\frac{3}{4} \div 3 =$

8.) $0.945 \div 0.07 =$

9.) $3 + 6.75 =$

10.) Complete the table using the ratio 3 to 5.

3	6		12		27	
5		15		40		55

11.) After 10 minutes on a stair-stepper, William has burned 210 calories. At the same rate, what is the total number of calories William will burn in a 30-minute workout?

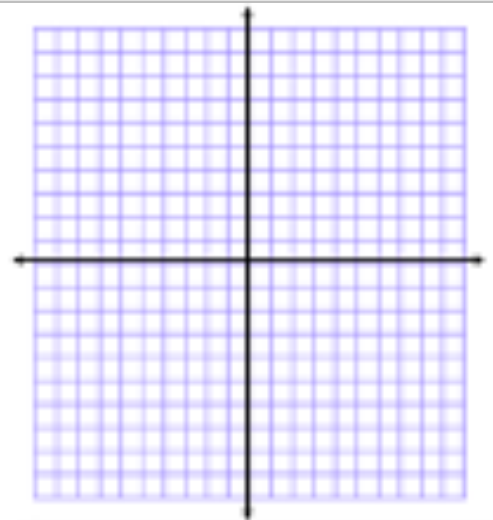
12.) The ratio of girls to boys in the 7th grade at Hypatia Middle School is 3:2. There are 24 boys in the 7th grade. What is the total number of students in the 7th grade at Hypatia Middle School?

13.) The fuel tank in Alexa's care holds 20 gallons of gas. How many gallons of gas does she have when her tank is $\frac{1}{4}$ full?

12.) Draw a square that is only in two quadrants, label the vertices A, B, C & D.

Find the area of the square.

Area =



A(_____, _____) B(_____, _____)

C(_____, _____) D(_____, _____)

Bonus: Add the odd numbers between 6 and 12. How much greater is their sum than the sum of the even numbers between 5 and 11?

Add, subtract, multiply or divide. Simplify if possible. Document your thinking.

1.) $\frac{5}{6} - \frac{1}{3} =$

2.) $12.809 + 4.56 =$

3.) $4\frac{1}{2} \div 1\frac{1}{2} =$

4.) $9\frac{1}{6} - 4\frac{1}{4} =$

5.) $5.1 \cdot 2.8 =$

6.) $0.63 + 2.056 =$

7.) $4\frac{3}{4} + 2\frac{2}{3} =$

8.) $0.56 - 0.492 =$

9.) $\frac{9}{10} \cdot \frac{2}{3} =$

10.) Fill in the chart:

Find:	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{1}{9}$	$\frac{1}{12}$
72							

11.) A recipe calls for $4\frac{1}{2}$ cups of sugar and another calls for $2\frac{2}{3}$ cups. How much total sugar is needed to make both recipes?

12.) A recipe requires three cups of flour and two eggs to make eight servings of cake. If I have 10 cups of flour and a dozen eggs, what is the most batches of the recipe that I can make?

13.) A pound of blueberries cost \$2.99 and a pound of strawberries cost \$3.29. What is the combined cost of a pound of each?

12.) Draw a parallelogram that is only in two quadrants, label the vertices A, B, C & D.

Find the area of the parallelogram.

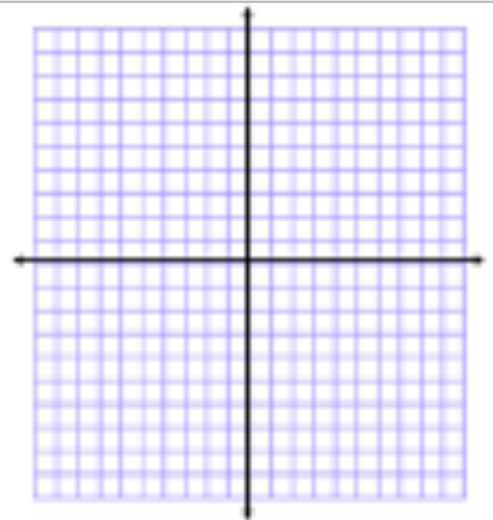
Area =

A(____, ____)

B(____, ____)

C(____, ____)

D(____, ____)



Bonus: Barry the bullfrog weighs four times as much as Taylor the tree frog. If Barry weighs 200 g, then how much does Taylor weigh?

Add, subtract, multiply or divide. Simplify if possible. Document your thinking.

1.) $4\frac{2}{5} \cdot \frac{5}{11} =$

2.) $27 - 13.6 =$

3.) $45.9 + 51.6 =$

4.) $\frac{7}{12} \div 1\frac{5}{6} =$

5.) $5\frac{1}{2} - 3\frac{5}{6} =$

6.) $17.821 - 15.9 =$

7.) $24.5 \div 0.05 =$

8.) $4\frac{1}{4} + 3\frac{3}{5} =$

9.) $0.082 \cdot 0.05 =$

10.) Complete the table using the ratio 3 to 6 (it might be helpful to simplify the ratio).

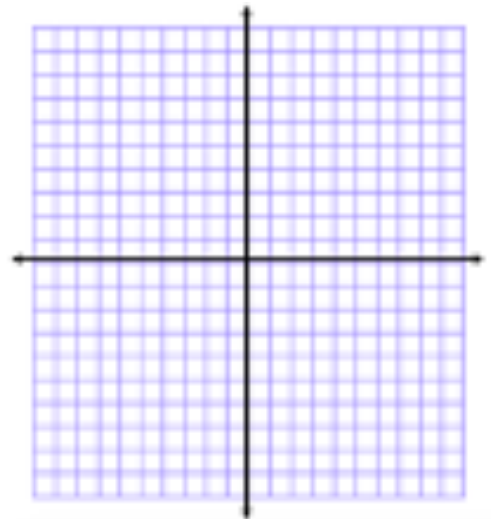
3	6		10			30
6		18		27	32	

11.) The ratio of roses to tulips in a garden is 2 to 9. If there are 10 roses, how many tulips would you expect to find in the garden?

13.) Which would give you the most area for your rectangular garden:

- A 4 foot by 3 foot garden
- A 2 foot by 6 foot garden
- A 3 foot by 6 foot garden
- A 2 foot by 3 foot garden

12.) Draw a pentagon that is in at least two quadrants, label the vertices A, B, C, D & E



Find the area of the pentagon

Area =

A(____,____) B(____,____) C(____,____)

D(____,____) E(____,____)

Bonus: If I sit in a row of 26 seats, then the ratio of the number of seats on my left to the number of seats on my right could be:

- a.) 1:1 b.) 1:2 c.) 1:3 d.) 1:4

Add, subtract, multiply or divide. Simplify if possible. Document your thinking.

1.) $\frac{11}{16} \cdot \frac{8}{9} =$

2.) $4\frac{1}{5} \cdot 1\frac{1}{9} =$

3.) $63.6 \div 0.12 =$

4.) $9\frac{1}{6} + 2\frac{7}{9} =$

5.) $17.5 + 19.68 =$

6.) $7\frac{3}{5} - 2\frac{1}{10} =$

7.) $4\frac{1}{2} \div 3\frac{1}{3} =$

8.) $0.305 \cdot 1.4 =$

9.) $12 - 4.5 =$

10.) Fill in the chart:

Find:	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{20}$	$\frac{1}{25}$
100						

11.) If I can buy 12 cans of soda for \$5, what is the price per can? Round your answer to the nearest penny.

12.) Sam finds 4 shells each minute at the beach. At this rate how many shells could she find in an hour?

13.) Why is it not reasonable to expect that Sam would find the number of shells you calculated in question 12?

12.) Draw a rectangle that is in all four quadrants, label the vertices A, B, C & D.

Find the area of the rectangle.

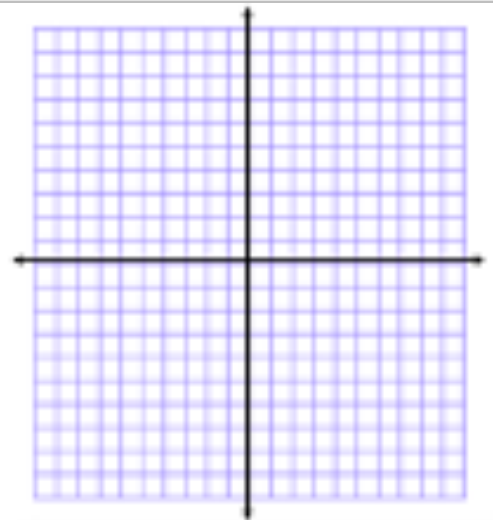
Area =

A (____, ____)

B (____, ____)

C (____, ____)

D (____, ____)



Bonus: If 4 of Josh's friends can paint his fence in 12 hours, and all of his friends work at the same rate, then how many hours would it take for 8 of his friends to paint his fence?

Add, subtract, multiply or divide. Simplify if possible. Document your thinking.

1.) $\frac{7}{8} + \frac{7}{12} =$

2.) $7\frac{3}{4} + \frac{5}{6} =$

3.) $9 - 2\frac{1}{4} =$

4.) $2.1 - 0.876 =$

5.) $5\frac{1}{4} \cdot \frac{2}{3} =$

6.) $4.8 \cdot 2.6 =$

7.) $15.8 + 16.3 - 9.75 =$

8.) $4\frac{1}{2} \div 1\frac{1}{2} =$

9.) $0.375 \div 0.3 =$

10.) Complete the table using the ratio 4 to 6 (it might be helpful to simplify the ratio).

4	8	12		30		48
6			36		51	

11.) Leah collected 2,400 grams of nickels in a fundraiser. Each nickel has a mass of 5 grams. How much **money** did Leah raise?

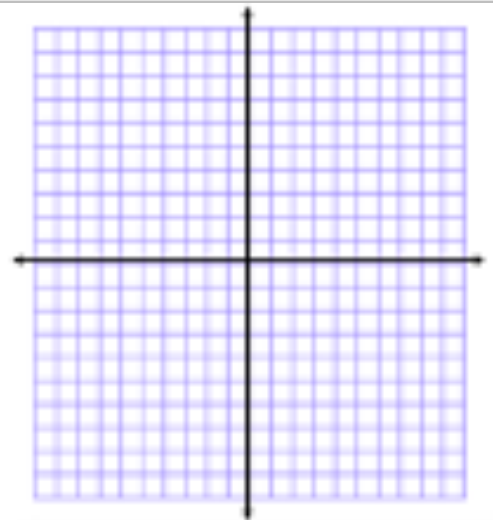
12.) The ratio of the number of dogs to cats in a neighborhood is 4 to 5. If there are 12 dogs in the neighborhood, how many cats would you find in the neighborhood?

13.) What is the sum of all the whole number factors of 20?

12.) Draw a trapezoid that is in at least two quadrants, label the vertices A, B, C, & D.

Find the area of the trapezoid.

Area =



A (____, ____) B (____, ____)

C (____, ____) D (____, ____)

Bonus: What is the difference between the greatest prime number less than 40 and the least prime number greater than 20?