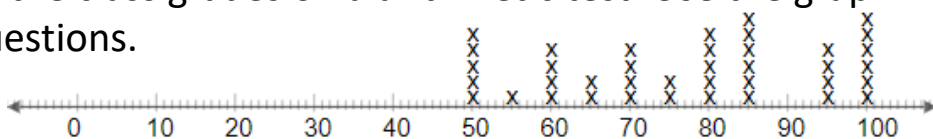


Warmup

1. The line plot represents the class grades on a arithmetic test. Use the graph to answer the following questions.



How many students scored a 100? _____

How many students scored a 75? _____

How many students are in the class (assuming all students took the test)? _____

2. Calculate:

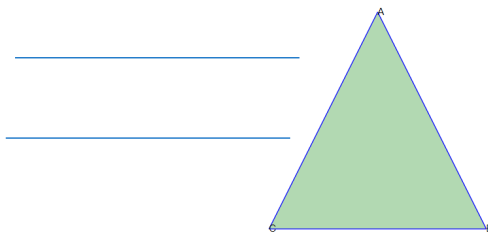
$$-5 \div 1 = \underline{\hspace{2cm}}$$

$$12 \div -3 = \underline{\hspace{2cm}}$$

$$-63 \div -7 = \underline{\hspace{2cm}}$$

$$-35 \div 5 = \underline{\hspace{2cm}}$$

- Given: Triangle ABC
 3. AC=408 cm, BC=1050 cm,
 and AB =408 cm
 Classify the triangle using the lengths of the
 sides.



4. Reduce $\frac{45}{70}$ using the GCF

I. Bar Graphs

Bar Graphs: One method of graphing data to help analyze and summarize the information, characterized by bars or rectangles to represent the data.

The chart represents the final grades for the 18 students in Algebra 1. Use the chart to answer the questions.

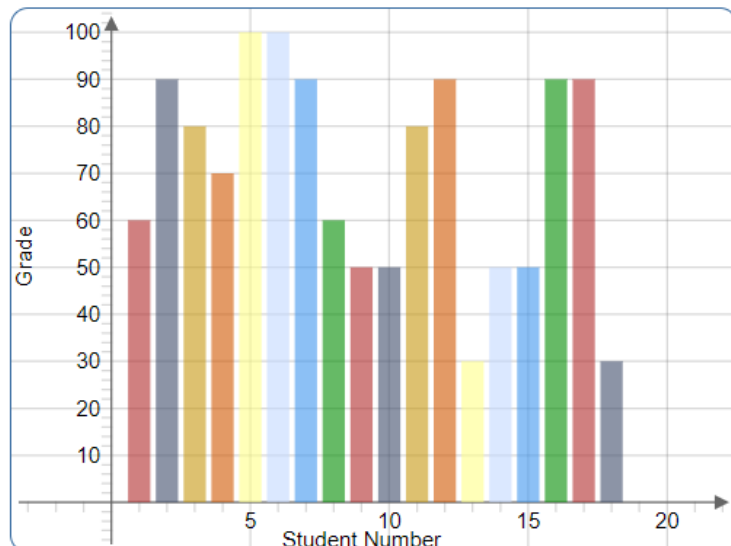
How many students received a 100%? _____

How many students received a 50%? _____

How many students received a 80%? _____

What was Student #15's score? _____

What was Student #8's score? _____



II. Line Graphs

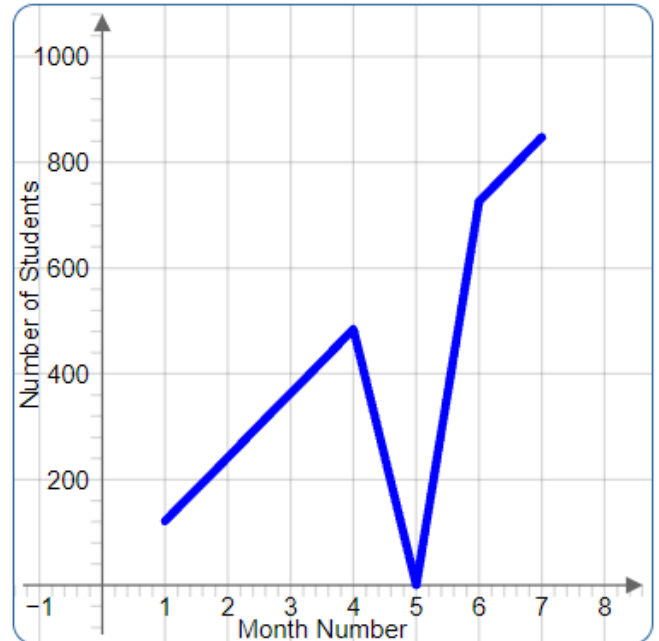
Line Graphs: One method of graphing data to help analyze and summarize the information, characterized by a line connecting the members of the data set.

The chart shows the data for the number of students enrolled for the past 7 months.

The data for month 5 was accidentally recorded as 0. Based on the information for the chart, what is a reasonable guess for number of students in month 5? _____

How many students were enrolled in the first month? _____

How many students are enrolled in month 7? _____



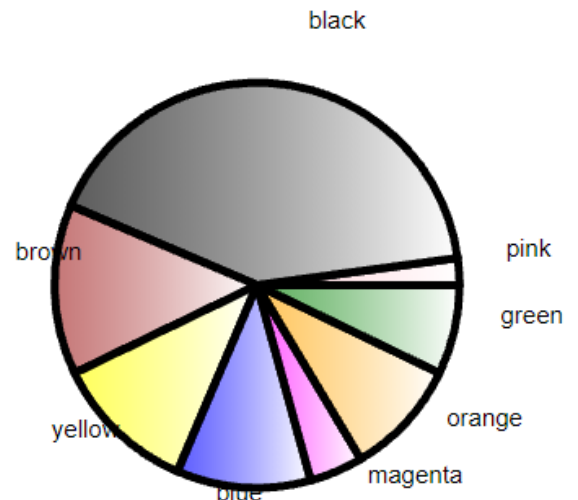
III. Pie Graphs

Pie Graphs: One method of graphing data to help analyze and summarize the information, characterized by a circle divided into sections that represent the data.

The students in art class were asked what their favorite color is. The data was graphed in the following pie chart.

What color did the students like the most? _____

What color did the students like the least? _____



IV. Practice

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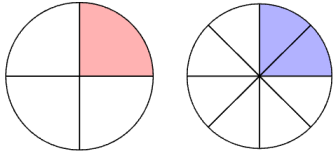
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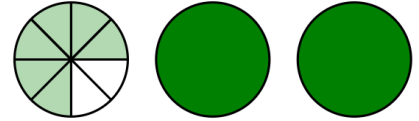
Warmup

1. What fraction of the circles are shaded?



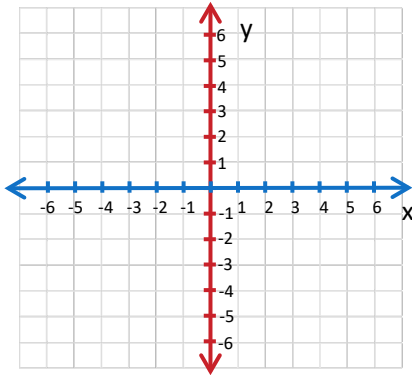
2. What is the LCM of 10 and 8?

3. Write the improper fraction and mixed number that represents the shaded section



4. Plot the points

A:(5,-1), B:(2,4), C:(0,-3), D:(-4,-3)



5. Calculate:

$$\frac{7}{12} + \frac{3}{12} = \underline{\hspace{2cm}}$$

Is the fraction written in simplest form? Yes / No

If the fraction is not in simplest form, reduce it.

6. Label the top and bottom of the fraction with the proper names.

I. Same or Different Denominators

Determine if each pair of fractions have the same or different denominators.

$$\frac{3}{4} \text{ and } \frac{3}{5}$$

Same

Different

$$\frac{1}{8} \text{ and } \frac{3}{8}$$

Same

Different

$$\frac{5}{6} \text{ and } \frac{3}{9}$$

Same

Different

7. Does each pair of fractions have the same or different denominators?

$$\frac{2}{3} \text{ and } \frac{4}{5}$$

Same

Different

$$\frac{1}{6} \text{ and } \frac{5}{6}$$

Same

Different

$$\frac{4}{9} \text{ and } \frac{4}{7}$$

Same

Different

Fraction Addition and Subtraction:

Fractions must have the same denominator before calculating the sum or difference.

$$\frac{7}{12} + \frac{3}{12} = \underline{\hspace{2cm}}$$

$$\frac{5}{8} - \frac{1}{8} = \underline{\hspace{2cm}}$$

II. Adding and Subtracting Fractions with Different Denominators

To Add or Subtract Fractions with Different Denominators:

$$\frac{1}{4} + \frac{2}{8} =$$

1. Determine the LCM of the two denominators.
2. Rewrite the fractions using the LCM as the denominator.
3. Add or subtract the fractions
4. Write the answer in simplest form

9. What is the LCM of the denominators of the fractions $\frac{1}{10}$ and $\frac{3}{8}$?

10.

11. Find the missing numerators

$$\frac{1}{10} = \frac{\quad}{40}$$

$$\frac{3}{8} = \frac{\quad}{40}$$

12.

13. Add or Subtract the Fractions

$$\frac{4}{40} + \frac{15}{40} =$$

14.

Write the answer in simplest form. $\frac{19}{40}$ is in simplest form. It is a proper fraction and the GCF of the numerator and denominator is 1.

Practice Questions 15 and 17 until you can answer the questions correctly 3 times in a row.

15. Practice Step-By-Step adding Fractions with Different Denominators.

Add or Subtract the Fractions

$$\frac{3}{10} + \frac{1}{2} =$$

16. Add or Subtract the Fractions

$$\frac{8}{9} + \frac{2}{3} =$$

17. Practice Adding Fractions with Different Denominators.

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Success Check # _____

Name:

Date:

Warmup

1. Write $\frac{3}{15}$ in simplest form.

2. $\frac{5}{7} - \frac{2}{8} = \underline{\hspace{2cm}}$

3. The perimeter of a square is 48 inches. What is the length of each side?
Each side = inches

4. Write the decimal numbers

Four tenths:

Four hundredths:

Forty-four hundredths:

Four and four tenths:

Four and forty-four hundredths:

5. A class has 130 students. How many boys are in the class if there are 80 girls?

I. Ratio

Ratio: A comparison of two numbers by division. A ratio shows the relationship between the numbers. Most ratios have an *unstated* total.

Three girls to four boys is written: 3 to 4 3:4 $\frac{3}{4}$

Use the information from Warmup #5 to write the following ratios:
boys to girls

 boys to girls boys : girls $\frac{\text{boys}}{\text{girls}}$

girls to boys

 girls to boys girls : boys $\frac{\text{girls}}{\text{boys}}$

girls to total students

 girls to students girls : students $\frac{\text{girls}}{\text{students}}$

Express each relationship as a ratio in reduced form. (Ratios should be left as an improper fraction)

6. two adults to twelve children

_____ to _____

7. ten wins to five loses

_____ : _____

8. six plants to eight animals

(Use a fraction bar)

9.

_____ : _____ to _____

II. Using Ratio to Calculate Totals

The team won $\frac{6}{9}$ of the games and lost the rest. What is the teams win-loss ratio?

1. How many games did the team play? _____
2. How many games did they win? _____
3. How many games did they lose? _____
4. What is ratio to express the wins to loses? _____

The bag contains red marbles and green marbles. The ratio of the marbles is 5:8. What fraction of the marbles are red?

Eight hundred tickets were sold for a concert. The ratio of child to adult tickets sold is $\frac{1}{7}$. What is the ratio of the adult to the total number of tickets sold?

10. Express blue cars to total cars as a ratio or rate in simplest form when the ratio of blue cars to grey cars is 30 to 9.

$$\frac{\text{blue cars}}{\text{total cars}}$$

11. Express wins to total games as a ratio or rate in simplest form when the ratio of wins to loses is 14 to 14.

$$\frac{\text{wins}}{\text{total games}}$$

12.

III. Rate

Rate: A ratio of two measurements with different units. A unit rate is a rate simplified so it has a denominator of 1.

Four miles to One hour is written: 4 to 1 4:1 $\frac{4}{1}$

Express each ratio as a unit rate.

13. 35 dollars for 7 hours
_____ to _____

14. 300 revolutions per 5 hours
_____ : _____

15.

IV. Practice

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Success Check # _____

Name:

Date:

Warmup

1. Write $\frac{4}{100}$ in simplest form.

2. $\frac{24}{25} - \frac{2}{25} = \underline{\hspace{2cm}}$

3. List the factors of 100.

4. Write the decimal numbers
 five tenths: _____
 five hundredths: _____
 Seventy-five hundredths: _____
 One and five tenths: _____
 one and Seventy-five hundredths: _____
 Seventy-five 75: _____

5. Express 80 cups of sugar to 100 cups of water as a ratio or rate in simplest form.

I. Decimal Numbers

Write the number four hundred sixty-one and thirty-two hundredths.

Write the number forty-five and six tenths.

hundreds	tens	ones	.	(and)		

To Write a Decimal as a Fraction:

1. Read the decimal number correctly.
2. Write it as a fraction or mixed number.
3. Simplify the answer.

forty-five and six tenths

$$45 \frac{6}{10} = 45 \frac{6 \div 2}{10 \div 2} = 45 \frac{3}{5}$$

Write seven tenths as a fraction in simplest form.

Write fourteen hundredths as a fraction in simplest form.

6. Write 0.9 as a fraction in simplest form.

7. Write 44.25 as a fraction in simplest form.

8. Write 0.08 as a fraction in simplest form.

9.

II. Decimal Numbers to the Thousandths Place and Smaller.

Write 40.825 as a fraction in simplest form.



To Write a Decimal as a Fraction:

1. Read the decimal number correctly.
2. Write it as a fraction or mixed number.
3. Simplify the answer.

10. Write 100.405 as a fraction in simplest form.

1. Enter the Mixed Number Before reducing _____
2. Enter the mixed number in simplest form _____

11.

Lesson 43 #14. 300 revolutions per 5 hours
300 revolutions : 5 hours = **60 revolutions : 1 hour**



12. What hand on the clock revolves 60 times an hour?

IV. Practice

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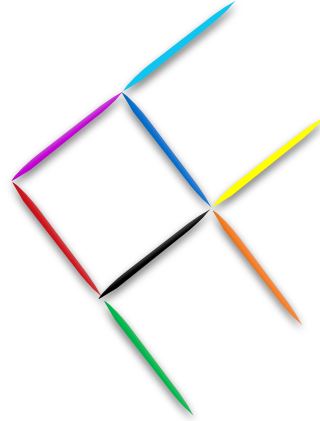
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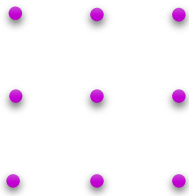
I. Toothpick Challenge

Turn the fish around by moving only 3 toothpicks. No overlapping the toothpicks. Do not move the green toothpick.



II. Connect With Four

Without lifting your pencil, can you connect all of the dots below with four straight lines?



Problem Solving Tip:

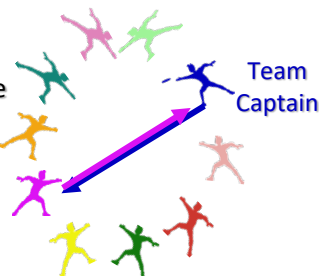
III. Ultimate Practice

Ultimate is a sport originally known as ultimate frisbee. It is a game played with two teams that toss the flying disc from team member to team member with the goal of getting past the end-line to score a point.



The blue team likes to challenge themselves during practice. The team of ten members stands around the field in a circle. The team captain starts by calling out a number (x). The frisbee is then passed to the person x places clockwise around the circle. That person then passes it to the person that is x spaces away from them. If the team passes the frisbee to everyone and returns it to the team captain before anyone else receives it twice, the team takes a water break. If they do not, then they run a lap around the field.

For Example: If the captain calls out "5" the frisbee is thrown to the 5th person to his right (clockwise). The purple person throws it to the fifth person to his right, which is back to the team captain. Only two team members touched the frisbee, therefore they need to run a lap.



What numbers can the captain call out that result in a water break?

IV. Modifying the Goat Pen

Farmer Bob is modifying a dog pen. The pen is a rectangle with length=4 feet and width=3 feet. The area is too small for the dogs. He decided to double the length.

Draw the original dog pen (Label the length and width):

What was the area of the original dog pen? (length=4 and width=3) _____

What is the new length? _____

Draw the larger dog pen. Label the length and width.

What is the area of the larger pen? _____

V. Missing Operations

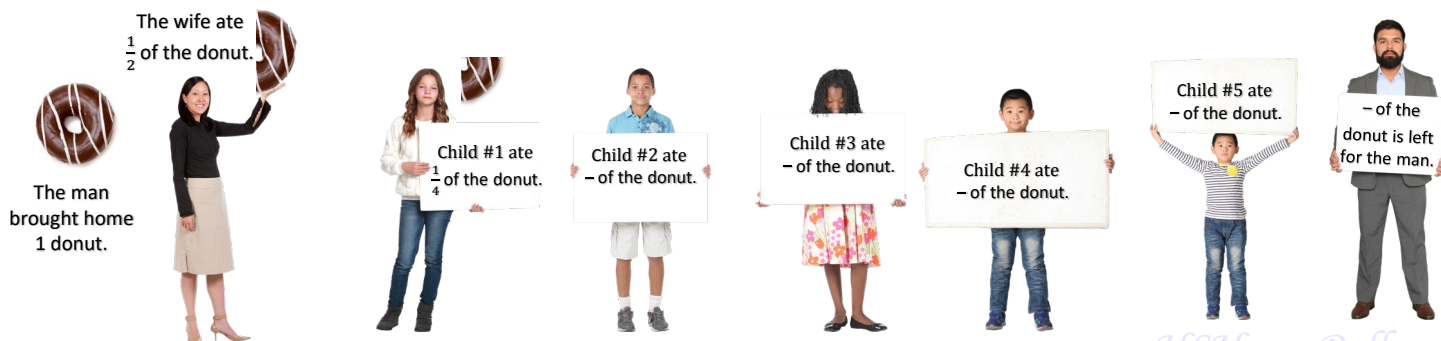
Choose the operations to make a true equation.

The operation choices are: addition(+), subtraction(-), multiplication(x), division(/)

$$3 \text{ ____ } 7 \text{ ____ } 8 \text{ ____ } 1 \text{ ____ } 2 = 3$$

VI. The Family Donut

One evening a man brought home one donut. He told everyone they can have $\frac{1}{2}$ of whatever is left of the donut. He cut the donut in half and gave the first piece to his wife. If each of the 5 children took a turn eating one-half of the **remaining amount**, then how much donut is left in the box for him (he gets the remaining amount) to eat after all the other family members ate their portion? (Hint: his wife eats $\frac{1}{2}$ of the donut. The first child eats $\frac{1}{4}$ of the donut.)



IV. Practice

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Success Check # _____

Name:

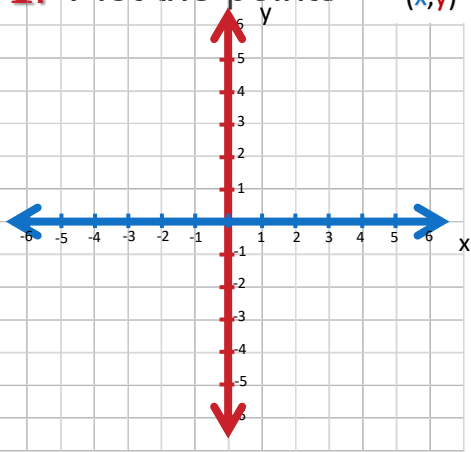
Date:

Warmup

1. Plot the points

(x,y)

A: (-3,-4)
 B: (6,5)
 C: (3,2)
 D: (0,-1)



2. Calculate:

$$x = -50 \div 5$$

3. Evaluate the expression if $x = 1$, and $y = -7$

$$x + y$$

4. Evaluate the expression if $x = 6$

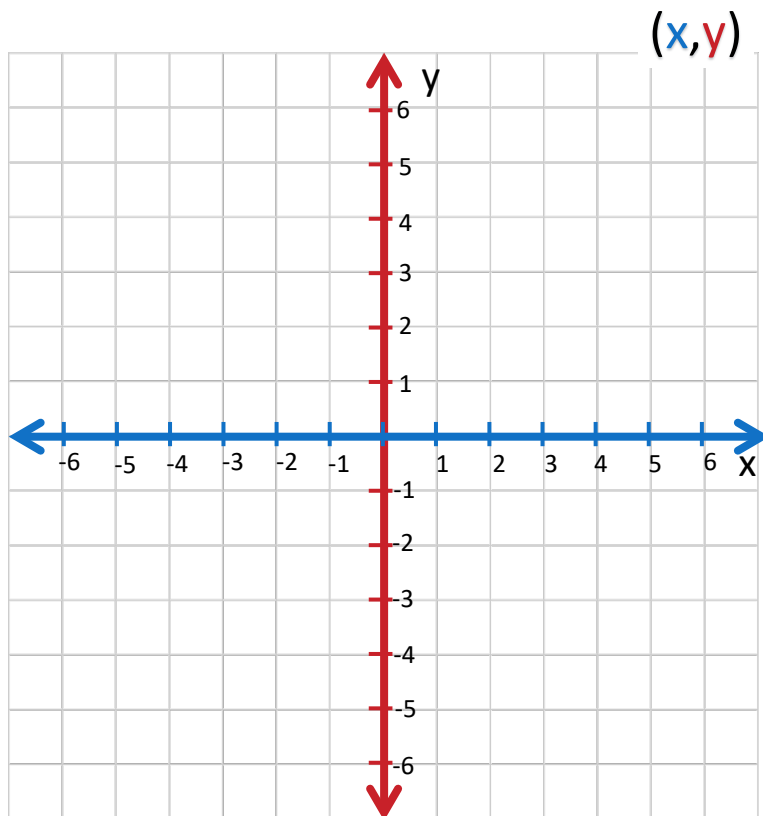
$$-3x + -5$$

I. Graph Lines on the Coordinate Plane by Calculating (x,y) Values

Graph the Function $y = 2x$ by setting up a table of (x,y) values.

X		Y
-2		
-1		
0		
1		
2		

Line: A line is drawn on the coordinate plane through two points.

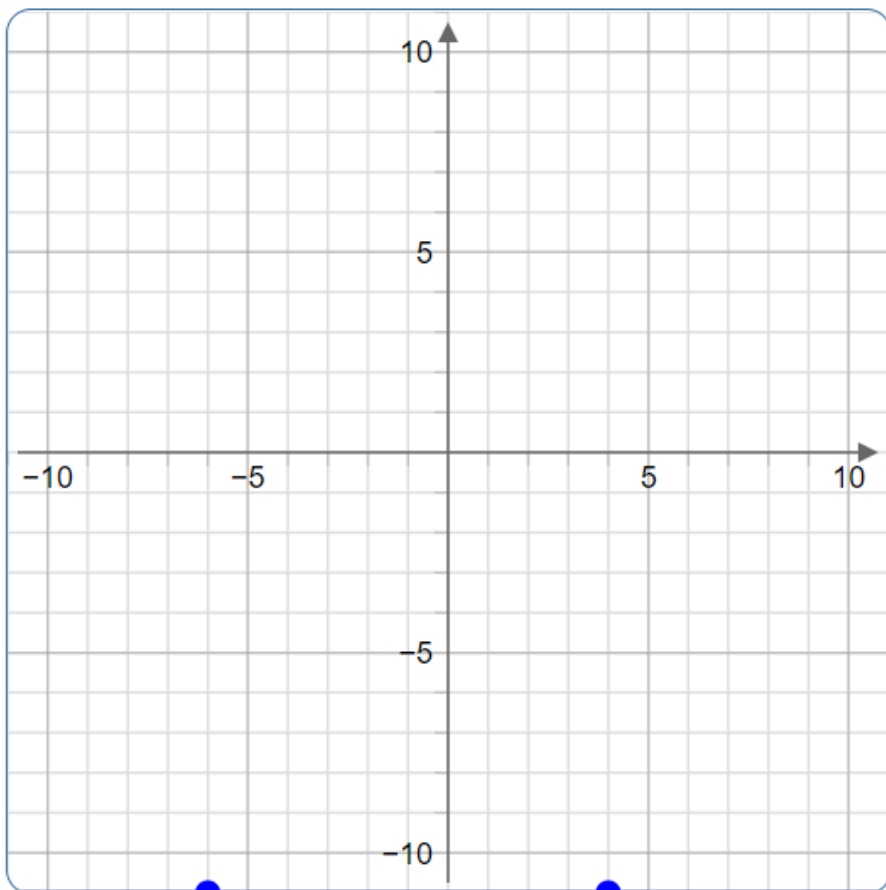


Graph the equation $y = 3x - 3$

To graph a line:

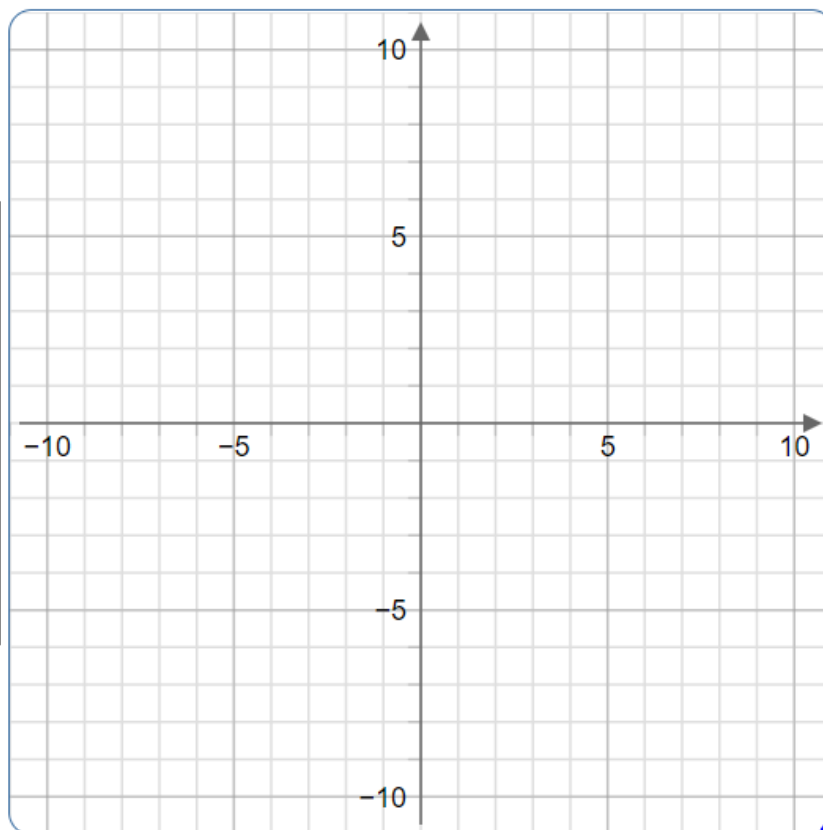
1. Substitute the values of x
2. Solve for y
3. Graph the (x,y) point on the coordinate plane.
4. Connect the points
5. Write the equation on the line.

x	$3x-3$	y
-2	$3(-2)-3$	
0	$3(0)-3$	
1	$3(1)-3$	
3	$3(3)-3$	

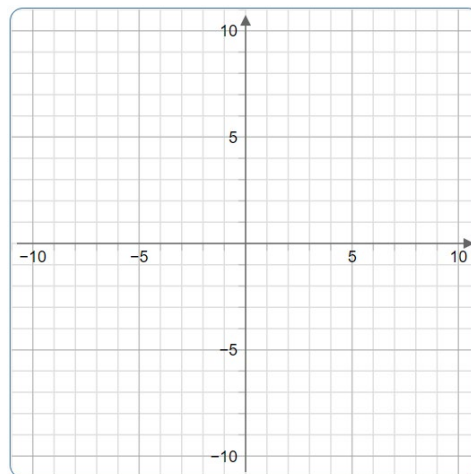
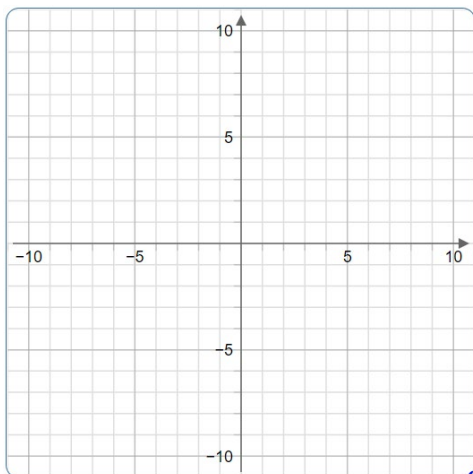


5. Graph the equation $y = 5x - 4$

x	$5x-4$	y
-1	$5(-1)-4$	
0	$5(0)-4$	
1	$5(1)-4$	
2	$5(2)-4$	



6.



Two coordinate planes are given to allow you to practice more than once.

II. Practice

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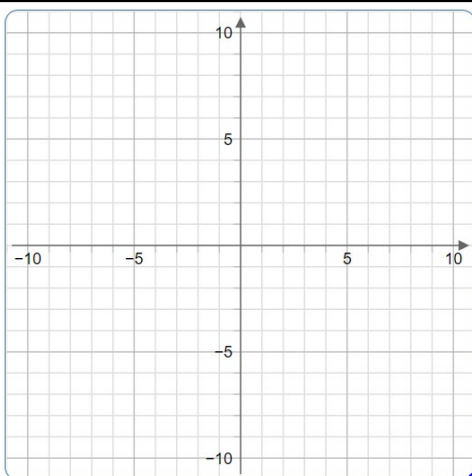
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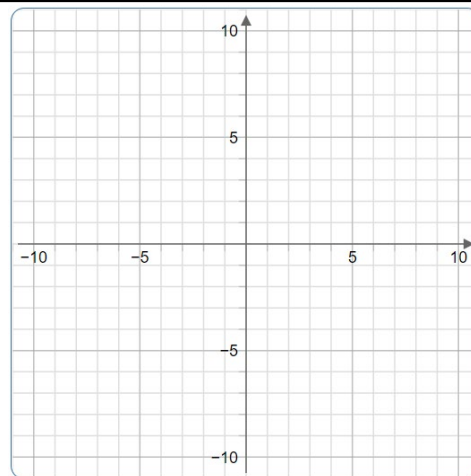
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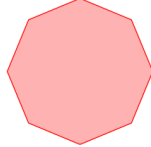
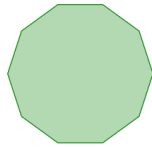
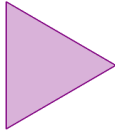
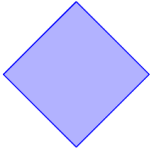
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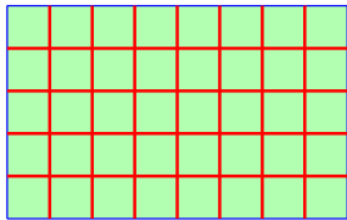
Date:

Warmup

1. Classify Each polygon by the number of sides.



3. Calculate the Area and Perimeter of the rectangle



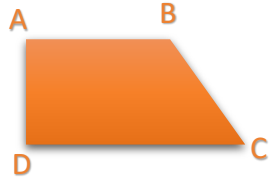
8 ft.

5 ft.

Area: _____

Perimeter : _____

2. Use trapezoid ABCD to answer the following questions.



Two sides that are

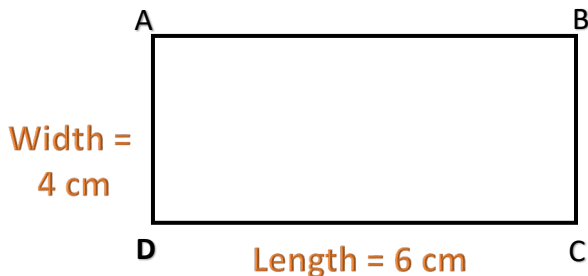
parallel: _____

perpendicular: _____

4. Simplify

$$2x + 5x + 8 + 3x + 7 =$$

I. What is a Parallelogram?



Calculate the **area** of the rectangle

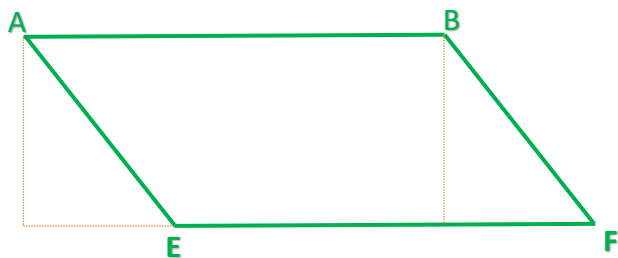
Calculate the **perimeter** of the rectangle

Glue or draw the parallelogram here

Parallelogram: A _____ sided polygon with opposites sides

_____ and _____.





Identifying properties of a polygon using symbols:

To show congruent sides use tick marks.

$$\overline{AB} \cong \overline{EF} \text{ and } \overline{AE} \cong \overline{BF}$$

To show parallel sides, use arrows.

$$\overline{AB} \parallel \overline{EF} \text{ and } \overline{AE} \parallel \overline{BF}$$

Determine if each shape is a parallelogram.



Parallelogram

Not a parallelogram



Parallelogram

Not a parallelogram

6.



Parallelogram

Not a parallelogram

7.

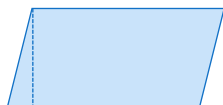


Parallelogram

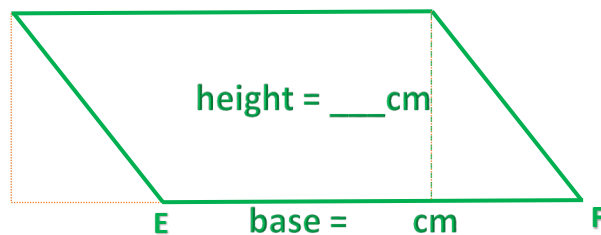
Not a parallelogram

II. Area of a Parallelogram

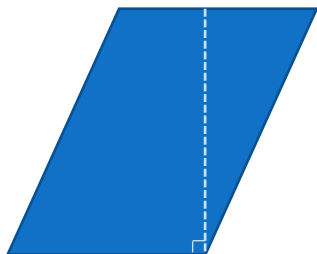
Area of a Parallelogram: The base and the height of a parallelogram form a _____ angle.



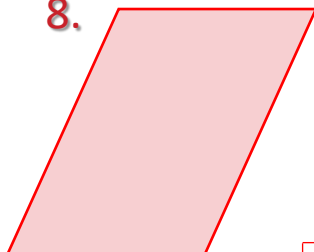
$$\text{Area} = \text{base} \times \text{height}$$



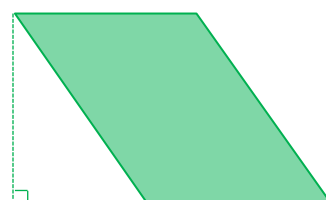
Label the base and height of each parallelogram



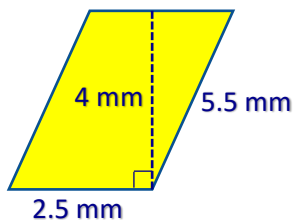
8.



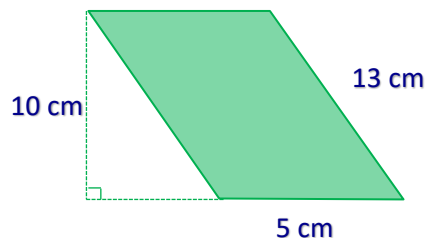
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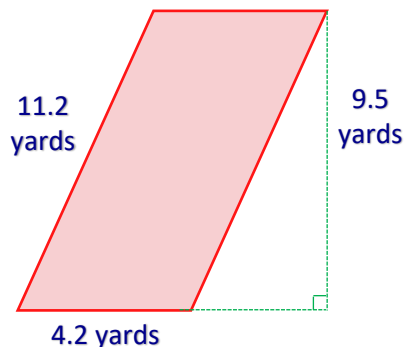
Find the Area of the parallelogram



Find the Area of the parallelogram

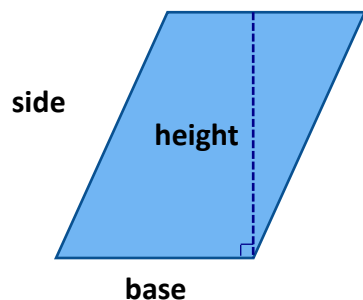


10. Find the Area of the parallelogram



11. Find the Area of the parallelogram (Practice this question as many times as necessary to become confident you can find the area of a parallelogram)

II. Perimeter of a Parallelogram



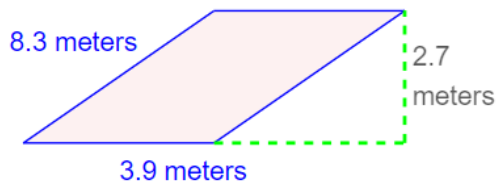
Perimeter: The perimeter of a figure is the _____.

Perimeter can be measure by a _____.

Some examples of units used for perimeter include _____.

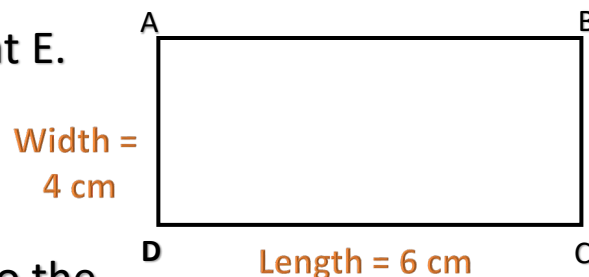


Find the Perimeter of the parallelogram

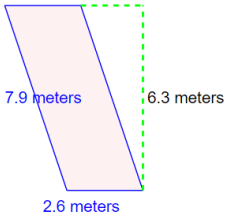


I. Construct a parallelogram from a rectangle

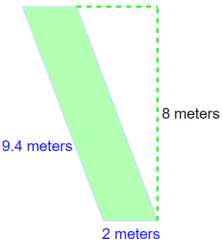
1. Put a point on $\overline{CD}$, name it point E.
2. Draw line segment $\overline{AE}$
3. Cut out rectangle ABCD.
4. Cut along $\overline{AE}$
5. Translate, or slide triangle ADE to the right such that point D is on point C (Keep point "C" as the name of the point) and point A is on Point B (Keep "B" as the name of the point). Point E should be to the right of point B. Name it point "F"
6. Glue the new shape to the bottom of page one of your notes.
7. Your final shape should look like the parallelogram on the top of page 2.



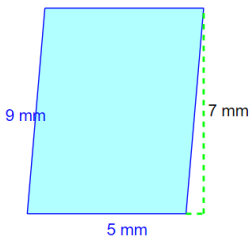
Find the Perimeter of the parallelogram



12. Find the Perimeter of the parallelogram



13. Find the Perimeter of the parallelogram



IV. Practice

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Success Check # _____

Name:

Date:

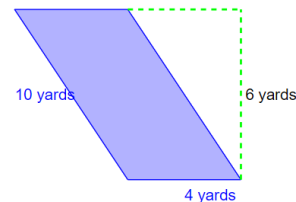
Warmup

1. Express the number of hens to total number of chickens as a ratio or rate in simplest form when the ratio of the number of hens to roosters is 200 to 250.

2. Calculate the Area and Perimeter of the parallelogram.

Area= _____

Perimeter= _____



3. Write the answer in simplest form.

$$\frac{4}{5} - \frac{7}{9} =$$

4. Write the mixed number $3\frac{4}{5}$ as an improper fraction.

I. A Fraction of a Whole Number

John ate $\frac{1}{4}$ of the cupcakes.

How many cupcakes did John eat?



$\frac{1}{4}$ of the cupcakes = _____

If Alexa gave $\frac{2}{3}$ of the cookies to her mom, how many cookies did she give away?



$\frac{2}{3}$ of the cookies = _____

of :

of means Multiply

$\frac{1}{3}$ of 3 $\frac{2}{3}$ of 3

$\frac{1}{3}$ of 9 = _____

$\frac{2}{3}$ of 9 = _____

$\frac{3}{3}$ of 9 = _____

$\frac{1}{4}$ of 12 = _____

$\frac{2}{4}$ of 12 = _____

$\frac{3}{4}$ of 12 = _____

$\frac{4}{4}$ of 12 = _____

5. Calculate

$\frac{1}{3}$ of 24 = _____

$\frac{2}{3}$ of 24 = _____

$\frac{3}{3}$ of 24 = _____

6.

II. Multiplication of a Fraction and Whole Number

Multiplication of a Fraction and Whole Number:

Change the whole number to a fraction.

Multiply the numerators to get the numerator of the answer.

Multiply the denominators to get the denominator of the answer.

Simplify the final answer.

$$\frac{1}{3} \times 9 = \frac{1}{3} \times \frac{9}{1} = \frac{1 \times 9}{3 \times 1} = \frac{9}{3} = 3$$

Simplify the answer

Multiply: $\frac{3}{4} \times 16$

Multiply: $(\frac{3}{8})(11)$

7. Multiply: $(\frac{7}{10})(6)$

8.

III. Multiplication of a Fraction and a Fraction

Multiplication of a Fraction and a Fraction:

Multiply the numerators to get the numerator of the answer.

Multiply the denominators to get the denominator of the answer.

Simplify the final answer.

$$\frac{7}{9} \times \frac{2}{3} = \frac{7 \times 2}{9 \times 3} = \frac{14}{27}$$

Simplify the answer

Multiply: $\frac{3}{7} \times \frac{5}{9}$

Multiply: $(\frac{1}{5})(\frac{1}{5})$

9. Multiply: $\frac{3}{6} \times \frac{1}{10}$

10

IV. Multiplication of a Fraction and Mixed Number

Multiplication of a Fraction and a Mixed Number:

Change the Mixed number to an improper fraction.

Multiply the numerators to get the numerator of the answer.

Multiply the denominators to get the denominator of the answer.

Simplify the final answer.

$$\frac{3}{4} \times 5\frac{1}{2} = \frac{3}{4} \times \frac{11}{2} = \frac{3 \times 11}{4 \times 2} = \frac{33}{8} = 4\frac{1}{8}$$

Simplify the answer

Multiply: $3\frac{2}{5} \times \frac{5}{6}$

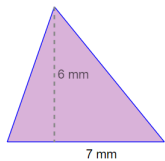
Multiply: $(\frac{7}{10})(3\frac{6}{10})$

11. Multiply: $1\frac{1}{6} \times 2\frac{3}{10}$

12.

V. Using the Area of a Triangle Formula

Area of a Triangle:



The base and height form a _____ angle

$$\text{Area of a Triangle} = \frac{1}{2}bh \quad b = \text{base, and } h = \text{height}$$

Find the area of a triangle with base=7 and height = 6

$$A = \frac{1}{2}bh$$

Substitute the known values into the formula

$$A = \frac{1}{2}(7)(6)$$

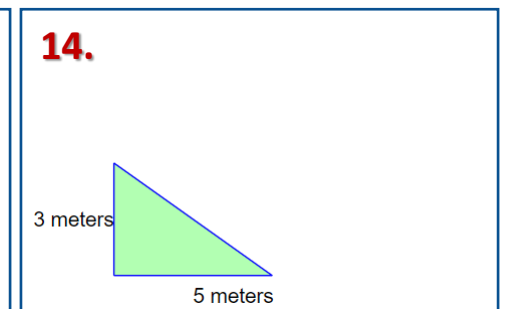
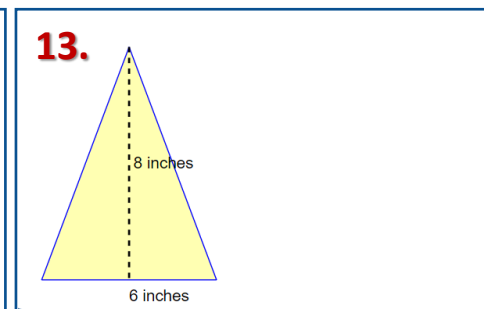
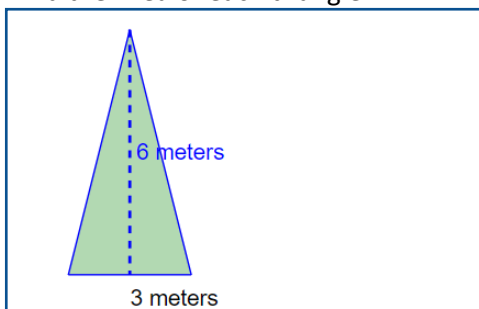
The commutative property of Multiplication allows us to multiply (7)(6) before multiplying by 7.

$$A = \frac{1}{2}(42)$$

Multiply $\frac{1}{2}$ times (42)

$$A = 21 \text{ mm}^2 \text{ or } 21 \text{ square mm}$$

Find the Area of each triangle



VI. Practice

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Success Check # _____

Name:

Date:

Name:

Attempt #:

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Name:

Attempt #:

Test # ____ Answer Sheet

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