Dear newest 7th graders and 7th grade families,

Congratulations on another successful school year! I hope you have a wonderful and relaxing summer. That being said, it is very important that you continue to work on your reading comprehension and writing skills during the time off from school. Please see below for the summer assignment for those entering the 7th grade.

1. 8 reading I Ready lessons must be completed by 8/1/2025

2. Read the novel *Number the Stars* by Lois Lowry. Here is a link for the book on Amazon: https://www.amazon.com/Number-Stars-Lois-Lowry/dp/0547577095.

3. Complete the chart located at the end of the letter to help you summarize the novel. (Students can copy and paste the chart onto their own Google doc.)

Please note that the students will be given a quiz on the book, *Number the Stars*, the first full week we are back at school. I am looking forward to working with all of you as we dive into this next chapter. Have a wonderful summer!

Sincerely,
Your 7th Grade ELA Teacher
Our Lady of Guadalupe Catholic School

Estimados alumnos y familias de 7.º grado:

¡Felicitaciones por otro año escolar exitoso! Les deseo un verano maravilloso y relajante. Dicho esto, es muy importante que sigan trabajando en su comprensión lectora y escritura durante el descanso escolar. A continuación, encontrarán la tarea de verano para quienes ingresan a 7.º grado.

1. Las 8 lecciones de lectura i-Ready deben completarse antes del 1 de agosto de 2025

2. Lee la novela "Number the Stars" de Lois Lowry. Aquí tienes el enlace al libro en Amazon: https://www.amazon.com/Number-Stars-Lois-Lowry/dp/0547577095.

3. Completa el cuadro al final de la carta para ayudarte a resumir la novela. (Los estudiantes pueden copiar y pegar el cuadro en su propio documento de Google).

Tengan en cuenta que los estudiantes tendrán un examen sobre el libro "Number the Stars" durante la primera semana completa de regreso a clases. Espero con ansias trabajar con todos ustedes mientras profundizamos en este nuevo capítulo. ¡Que tengan un verano maravilloso!

Atentamente,
Su profesora de Lengua y Literatura Inglesas de 7.º grado
Escuela Católica Nuestra Señora de Guadalupe

Number the Stars Review

Characters Who are the main characters? List the main characters in the next column. Include a 1-2 sentence explanation of the main characters.	
Setting When and where does this story take place? Provide a 3-4 sentence explanation of where the story took place and explain what was going on at that time.	
Key Events List 5 events that you thought were important in telling the story. Provide a 1-2 sentence summary of the key events that you chose.	
Summary Write a 7-10 sentence summary of the book. Provide information about the key events and themes found in the book.	

Dear Rising 7th Grade Students and Families,

Congratulations on successfully completing 6th grade! I am so proud of all your hard work and growth this year. As you move up into 7th grade, I am excited to welcome you to your next school year.

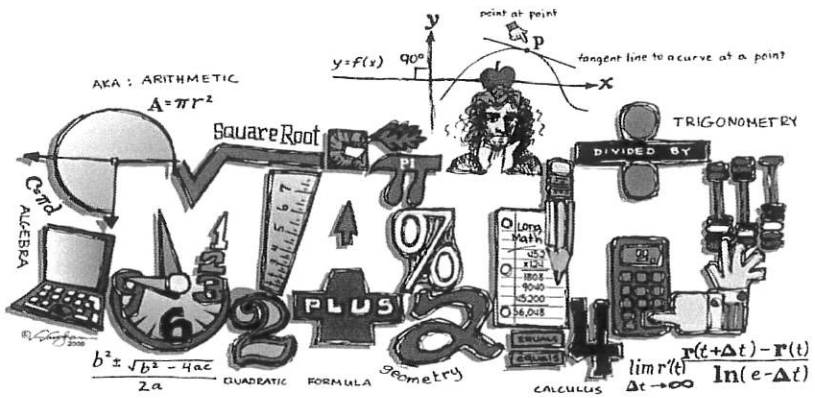
To help you stay sharp and start the year strong, there are a couple of summer expectations for math:

1. Each student will receive a review packet to complete over the summer. This packet is designed to reinforce key concepts learned in 6th grade and prepare you for the material we'll cover in 7th grade. The completed packet will be **collected and graded on the first day of school**, so be sure to take your time and do your best.
2. In addition to the packet, students must complete **six (6) i-Ready math lessons** by **August 1st.** These lessons will help keep your skills fresh and support your continued learning. Make sure to pace yourself and avoid leaving them all until the last minute!

Please encourage your child to work steadily throughout the summer. This preparation will make a big difference in ensuring a confident and successful start to the school year.

Have a safe, restful, and fun summer. I look forward to seeing you in September, ready to take on 7th grade with energy and enthusiasm!

Warm regards,
Your 7th Grade Math Teacher
Our Lady of Guadalupe Catholic School



Estimados estudiantes y familias que ingresan a 7.º grado:

¡Felicitaciones por completar con éxito el 6.º grado! Estoy muy orgulloso de todo su esfuerzo y crecimiento este año. Al pasar a 7.º grado, me complace darles la bienvenida a su próximo año escolar.

Para ayudarlos a mantenerse en forma y comenzar el año con fuerza, tenemos un par de expectativas para el verano en matemáticas:

1. Cada estudiante recibirá un paquete de repaso para completar durante el verano. Este paquete está diseñado para reforzar los conceptos importantes aprendidos en 6.º grado y prepararlos para el material que cubriremos en 7.º grado. El paquete **completo se recogerá y calificará el primer día de clases,** así que asegúrese de tomarse su tiempo y esforzarse al máximo.
2. Además del paquete, los estudiantes deben completar seis **(6) lecciones de matemáticas de i-Ready antes del 1 de agosto.** Estas lecciones les ayudarán a mantener sus habilidades actualizadas y a apoyar su aprendizaje continuo. ¡Asegúrense de ir a su propio ritmo y no dejarlas todas para el último momento!

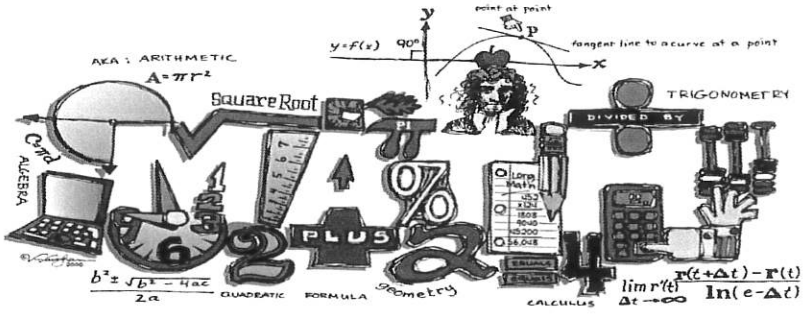
Por favor, anime a su hijo/a a trabajar con constancia durante el verano. Esta preparación marcará una gran diferencia para asegurar un comienzo de año escolar seguro y exitoso.

¡Que tengan un verano seguro, tranquilo y divertido! ¡Espero verlos en septiembre, listos para empezar 7.º grado con energía y entusiasmo!

Atentamente,

Su profesor/a de matemáticas de 7.º grado

Escuela Católica Nuestra Señora de Guadalupe



Week 1: Decimal and Fraction Operations

Adding & Subtracting Decimals

1. Write the problem vertically, lining up the decimal points.
2. Add additional zeroes at the end, if necessary, to make the numbers have the same number of decimal places.
3. Add/subtract as if the numbers are whole numbers
4. Bring the decimal point straight down

ex: $14.2 - 7.934$

$$\begin{array}{r} 14.200 \\ -\ 7.934 \\ \hline 6.266 \end{array}$$

Multiplying Decimals

1. Write the problem vertically with the numbers lined up to the right. The decimal points do NOT need to be lined up.
2. Ignore the decimals and multiply as if the numbers are whole numbers.
3. Count the total number of decimal places in the factors and put a decimal point in the product so that it has that same number of decimal places.

ex: 6.94×7.8

$$\begin{array}{rl} & 6.94 \longrightarrow \text{2 decimal places} \\ \times & 7.8 \longrightarrow \text{1 decimal place} \\ \hline & 5552 \\ + & 48580 \\ \hline & 54132 \end{array} \qquad \text{3 decimal places} \qquad 54.132$$

Dividing Decimals

1. Write the dividend under the long division symbol and the divisor to the left of it.
2. Move the decimal point in the divisor after the number to turn it into a whole number and then move the decimal in the dividend the same number of places. Then bring it up.
3. Divide as if the numbers are both whole numbers.
4. Annex zeros in the dividend as needed until there is no remainder. If your answer is a repeating decimal, write the answer using bar notation.

ex: $25.3 \div 0.3$

$$\begin{array}{r} 84.\overline{3} \\ 0.3\overline{)25.30} \\ -24 \\ \hline 13 \\ -12 \\ \hline 10 \\ -\ 9 \\ \hline 1 \end{array}$$

Order of Operations

1. Grouping Symbols (parentheses, brackets, etc.)
2. Exponents
3. Multiplication & Division (left to right)
4. Addition & Subtraction (left to right)

ex: $5 + 4(3 - 1.2)$

$5 + 4(1.8)$

$5 + 7.2$

12.2

Evaluate each expression.

1. $5.983 + 2.99$	2. $224 - 56.73$	3. $6.12 - 4.923$
4. $24.5 \cdot 3.2$	5. $0.23 \cdot 7$	6. $3.86 \cdot 9.15$
7. $14.8 \div 5$	8. $46.3 \div 1.5$	9. $147 \div 2.25$
10. $24.33 - 2.5 \cdot 7$	11. $3.9 + 4.5^2$	12. $9.25(18.4 - 2 \cdot 1.2)$

Solve each word problem, showing all work.

13. Jeff had $46.18 in his wallet Monday morning. He gave half of his money to his brother. He then bought two donuts for $0.75 each and a cup of coffee for $2.99. How much money did Jeff have left?

14. Five friends split a $65.20 bill at a restaurant. They also each left $2.75 for the tip. How much money did each person pay in all?

Adding Fractions & Mixed Numbers

1. Find a common denominator for the two fractions.
2. Add the two numerators and keep the denominator the same.
3. Add the whole numbers.
4. Simplify the answer and/or change improper fraction answers to mixed numbers.

ex: $3\frac{3}{4} + 2\frac{1}{2}$

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

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

$5\frac{5}{4} = \boxed{6\frac{1}{4}}$

Subtracting Fractions & Mixed Numbers

1. Find a common denominator for the two fractions.
2. Subtract the two numerators and keep the denominators the same. If the top numerator is smaller than the bottom numerator, borrow from the whole number and rename the top fraction.
3. Subtract the whole numbers.
4. Simplify the answer.

ex: $5\frac{1}{4} - 1\frac{2}{3}$

$5\frac{1}{4} = 5\frac{3}{12} = 4\frac{15}{12}$

$- \quad 1\frac{2}{3} = 1\frac{8}{12} = 1\frac{8}{12}$

$\boxed{3\frac{7}{12}}$

Multiplying Fractions & Mixed Numbers

1. Turn any mixed numbers and whole numbers into improper fractions.
2. Cross-simplify if possible.
3. Multiply the numerators and then multiply the denominators
4. Simplify the answer and/or change improper fraction answers to mixed numbers.

ex: $2\frac{1}{6} \cdot \frac{4}{7}$

$\frac{13}{3\cancel{6}_{3}} \cdot \frac{\cancel{4}^{2}}{7} = \frac{26}{21} = \boxed{1\frac{5}{21}}$

Dividing Fractions & Mixed Numbers

1. Turn any mixed numbers and whole numbers into improper fractions.
2. Keep the first fraction the same, change the division to multiplication, and flip the second fraction to its reciprocal.
3. Multiply the fractions.
4. Simplify the answer and/or change improper fraction answers to mixed numbers.

ex: $7 \div 1\frac{3}{4}$

$\frac{7}{1} \div \frac{7}{4}$

$\downarrow$

$\frac{1}{\cancel{7}_{1}} \cdot \frac{4}{\cancel{7}_{1}} = \frac{4}{1} = \boxed{4}$

Evaluate each expression.

15. $\frac{4}{5} + \frac{3}{4}$	16. $4\frac{2}{7} + 2\frac{9}{14}$	17. $8\frac{11}{12} + 9\frac{5}{18}$
18. $6 - \frac{3}{8}$	19. $8\frac{3}{5} - 2\frac{1}{3}$	20. $4\frac{1}{6} - \frac{8}{9}$
21. $\frac{4}{25} \cdot \frac{15}{16}$	22. $2\frac{3}{4} \cdot 8$	23. $6\frac{5}{8} \cdot 3\frac{1}{2}$
24. $\frac{7}{9} \div \frac{2}{3}$	25. $\frac{4}{5} \div 10$	26. $5\frac{2}{3} \div 2\frac{5}{6}$

Solve each word problem, showing all work.

27. Jaimie ran $3\frac{1}{2}$ miles on Monday. She ran half as far on Tuesday as she did on Monday. How far did Jaimie run in all on Monday and Tuesday?	28. A $5\frac{1}{2}$ quart pot is filled $\frac{2}{3}$ of the way with water. How many more quarts of water can the pot hold?

Week 2: Ratios and Proportions

Ratios

Ratios are comparisons of two quantities.
There are 3 different ways to write ratios:

- Fraction $\left(\frac{A}{B}\right)$
- Colon (A:B)
- Word Form (A to B)

Ratios can be simplified just like fractions.

ex: write the ratio of triangles to circles in 3 ways: ▲▲▲▲●●

$\frac{4}{2} = \boxed{\frac{2}{1},\ 2:1,\ 2 \text{ to } 1}$

Rates & Unit Rates

Rates are ratios that compare quantities measured in different units.
A unit rate is a rate with a denominator of 1.

To convert a rate to a unit rate:

1. Divide the numerator by the denominator
2. Either write your answer as a fraction with a label for the both the numerator and denominator OR as one number labeled with the first unit "per" the second unit

ex: express as a unit rate: 125 miles in 4 hours

$\frac{125 \text{ mi}}{4 \text{ hr}}$ $125 \div 4 = 31.25$

$\boxed{\frac{31.25 \text{ mi}}{1 \text{ hr}} \text{ or } 31.25 \text{ miles per hr}}$

Fractions, Decimals, & Percent

To convert a:

- Decimal to Percent: move the decimal point 2 places to the right — ex: $0.345 = \boxed{34.5\%}$
- Percent to Decimal: move the decimal point 2 places to the left — ex: $7\% = \boxed{0.07}$
- Decimal to Fraction: write the decimal over the place value of the last digit and then simplify — ex: $0.008 = \frac{8}{1000} = \boxed{\frac{1}{125}}$
- Fraction to Decimal: divide the numerator by the denominator — ex: $\frac{1}{5} = 5\overline{)1.0}$ $\boxed{0.2}$
- Percent to Fraction: write the percent over 100 and then simplify — ex: $45\% = \frac{45}{100} = \boxed{\frac{9}{20}}$
- Fraction to Percent: convert the fraction to a decimal and then convert the decimal to a percent — ex: $\frac{3}{10} = 0.3 = \boxed{30\%}$

Percent of a Number

1. Turn the percent to a fraction or decimal.
2. Multiply the fraction/decimal by the number.

ex: Find 18% of 40

$0.18 \cdot 40 = \boxed{7.2}$

Write each ratio in 3 ways.

29. A bank contains 15 pennies and 12 nickels. Write the ratio of nickels to pennies.	30. A bowl contains 6 apples and some bananas. If there are a total of 10 pieces of fruit, find the ratio of apples to bananas.

Convert each rate to a unit rate.

31. $4.25 for 64 fluid ounces	32. 297 miles on 11 gallons of gas	33. 124 feet in 10 seconds

Complete the chart by converting each number to a percent, fraction, and/or decimal.

Fraction	Decimal	Percent
34. $\frac{3}{8}$		
35.	0.45	
36.		72%
37.	0.1	
38. $\frac{3}{200}$		

Find each percent of a number.

39. 30% of 90	40. 15% of 38	41. 50% of 86
42. 75% of 160	43. 24% of 35	44. 2% of 74

Unit: NUMBER RELATIONSHIPS and COMPUTATION

Objective: Identify and determine equivalent forms of proper **fractions** as **decimals**, percents, and ratios - A.

Examples: Write $\frac{21}{25}$ as a decimal

Method 1:

Change $\frac{21}{25}$ to a fraction with a denominator of 10, 100, or 1000

EX: $\frac{21}{25} = \frac{?}{100}$

(Use 100, since 25 divides into 100 evenly)

$\frac{21}{25} = \frac{x4}{x4} = \frac{84}{100}$ $\frac{84}{100} = 0.84$ as a decimal

Method 2: Divide 21 by 25

$\frac{21}{25} \rightarrow 25\overline{)21.00}$ $\frac{0.84}{}$

-200

100

-100

Therefore: $\frac{21}{25} = 0.84$

1.) Write $\frac{19}{20}$ as a decimal. Use method 1

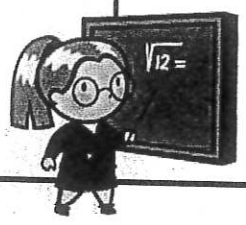
2.) Write $\frac{7}{8}$ as a decimal. Use method 2.

3.) Write $\frac{3}{16}$ as a decimal. Use method 2

4.) Write $\frac{27}{40}$ as a decimal. Use method 2

5.) Write $\frac{3}{4}$ as a decimal. Use method 1

6.) Write $\frac{3}{5}$ as a decimal. Use method 1



Unit: NUMBER RELATIONSHIPS and COMPUTATION
Objective: Identify and determine equivalent forms of proper **fractions** as decimals, **percents**, and ratios - **B**.

Key Concept: Percent (%) is a ratio that compares a number to **100**

Fraction to Percent:

EX: Change $\frac{19}{25}$ to a percent

Since % means out of 100, $\frac{19}{25} = \frac{?}{100}$

$\frac{19}{25} = \frac{x4}{x4} = \frac{76}{100}$

$\frac{76}{100} = 76\%$

Percent to fraction:

EX: Change 75% to a fraction in simplest form

75% means *75 out of 100*

$75\% = \frac{75}{100}$ **Write the percent as a fraction with a denominator of 100**

$\frac{75 \div 25}{100 \div 25} = \frac{3}{4}$ **Simplify**

1.) Change $\frac{17}{20}$ to a percent

2.) Change 84% to a fraction in simplest form

3.) Change $\frac{3}{4}$ to a percent

4.) Change 90% to a fraction in simplest form

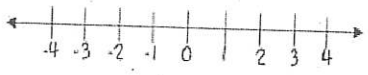
5.) Juan answered $\frac{24}{25}$ questions correctly on his quiz. What percent of the questions did he get correct?

6.) 78% of the class completed their homework last night. What fraction of the class completed their homework?

Week 3: Number System and Geometry Part 1

Comparing Integers

Integers are numbers without fractional parts. They can be positive, negative, or zero. The further right a number is on the number line, the greater it is.



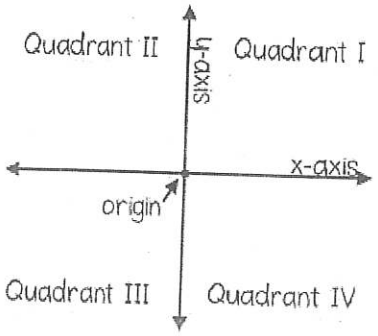
The absolute value of a number is the distance the number is from zero.

ex: compare with <, >, or =

$-7 \bigcirc |-9|$ ← The absolute value of $-9 = 9$

$-7 \boxed{<} 9$

The Coordinate Plane

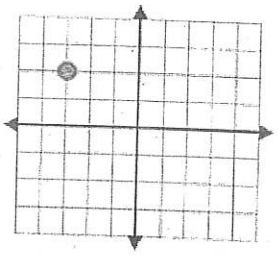


Ordered Pair: (x, y)

To graph a point on the coordinate plane, start at the origin. The first number in the ordered pair (the x-coordinate) tells you how far left (if negative) or right (if positive) to move. The second number (the y-coordinate) tells you how far up (if positive) or down (if negative) to move.

ex: Graph the point (-3, 2) and state the quadrant in which it is located.

Start at the origin, and move LEFT 3 and UP 2

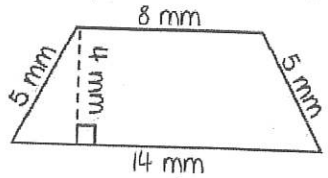


Quadrant II

Perimeter, Area and Volume

- Perimeter of Any Polygon: add all side lengths
- Area of a Rectangle: $A = lw$
- Area of Parallelogram: $A = bh$
- Area of Triangle: $A = \frac{1}{2}bh$
- Area of Trapezoid: $A = \frac{1}{2}h(b_1 + b_2)$
- Volume of Rectangular Prism: $V = lwh$

ex: Find the perimeter & area:



Perimeter: $P = 5 + 8 + 5 + 14 =$ **32 mm**

Area: This is a trapezoid, so use the area of a trapezoid formula: $A = \frac{1}{2}h(b_1 + b_2)$

The bases are the sides that are parallel, and the height is perpendicular to the bases.

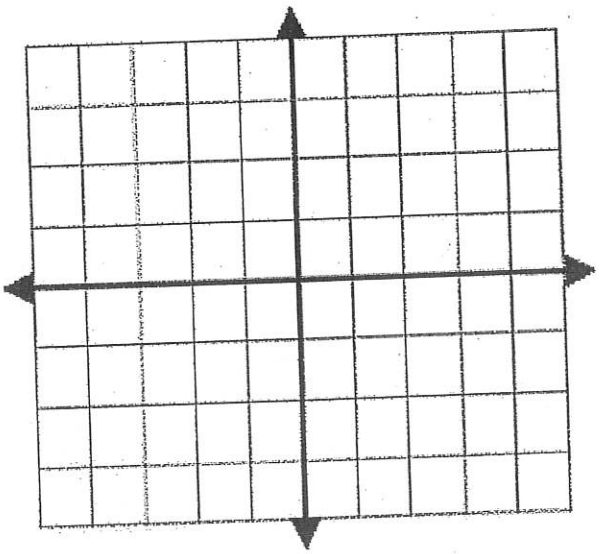
→ $A = \frac{1}{2}(4)(8+14) =$ **44 mm²**

Compare the integers with <, >, or =.

45. $-4 \bigcirc -5$	46. $2 \bigcirc -2$	47. $\lvert -5 \rvert \bigcirc \lvert 5 \rvert$	48. $-7 \bigcirc 6$	49. $-13 \bigcirc -9$
50. $\lvert -7 \rvert \bigcirc -6$	51. $-17 \bigcirc -14$	52. $\lvert -3 \rvert \bigcirc \lvert -2 \rvert$	53. $0 \bigcirc -6$	54. $\lvert -4 \rvert \bigcirc \lvert 6 \rvert$

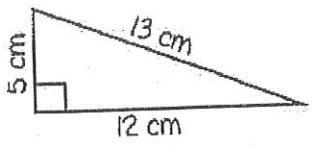
Graph and label each of the ordered pairs in the coordinate plane. Then state the quadrant or axis in/on which the point is located.

55. A(2, 4)	56. B(0, -3)
57. C(1, -1)	58. D(3, 3)
59. E(-4, 1)	60. F(2, 0)
61. G(-3, -2)	62. H(-2, 3)
63. I(0, 2)	64. J(-1, -4)

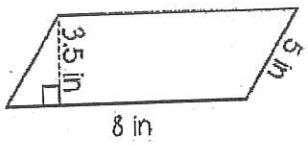


Find the perimeter, area, and/or volume of the given figure.

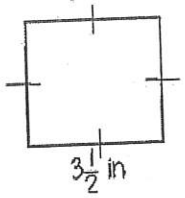
65. Find the perimeter & area:



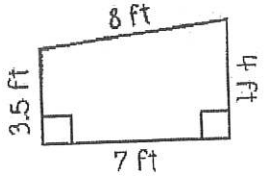
66. Find the perimeter & area:



67. Find the perimeter & area:

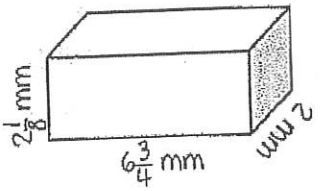


68. Find the perimeter & area:



69. Find the area of a square with a perimeter of 45 cm

70. Find the volume:

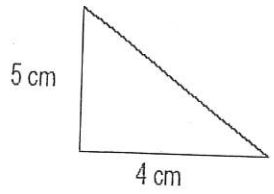


Week 4: Geometry Part 2

Unit: KNOWLEDGE of MEASUREMENT
Objective: Estimate and determine the area of a triangle with whole number dimensions.

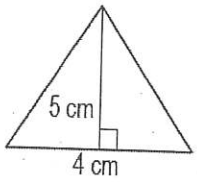
The area (**A**) of a triangle is one half the product of the base (**b**) and the height (**h**).
The formula for finding the area of a triangle is: **A = ½ bh** and is measured in square units.

Examples:



A = ½ bh A = ½ x 4 x 5 A = ½ x 20

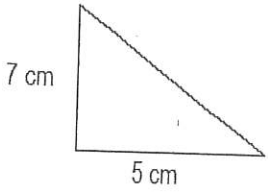
A = 10 cm²



A = ½ bh A = ½ x 4 x 5 A = ½ x 20

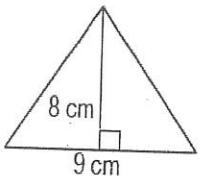
A = 10 cm²

1.) Determine the area of the triangle.



A = _____ cm²

2.) Determine the area of the triangle.



A = _____

3.) Determine the area of an obtuse triangle with a height of 11 cm and a base of 22 cm.

A = _____

4.) Determine the area of an isosceles triangle with a base of 13 cm and a height of 26 cm.

A = _____

5.) World famous pastry chef, Chen Lee, is designing a birthday cake for his son, who is a Geometry teacher. He has 4 layers, all triangles. He wants to put the largest layer (in area) on the bottom and the smallest layer on the top. Determine the area of each layer and order them from largest to smallest (4 = largest, 1 = smallest)

___ Milk Chocolate layer b = 12" h = 6" A =

___ Yellow cake layer b = 7" h = 11" A =

___ Dark Chocolate layer b = 4" h = 17" A =

___ White cake layer b = 9" h = 9" A =

6.) Natasha's dorm room is shaped like a triangle. The college brochure says it has an area of 875 square feet. The room is 35 feet long. Determine the width of the room at its widest point.

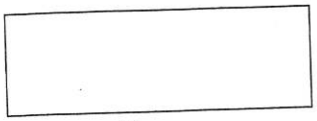
Unit: KNOWLEDGE of MEASUREMENT

Objective: Determine the missing measure of a square or rectangle given the area using whole number dimensions.

The **area (A)** of a **rectangle or square** can be found by **multiplying the length (l) by the width** (w). $A = l \times w$

The **missing measure** of a square or rectangle can be determined by using **division**.

Examples:



$A = 64 \text{ cm}^2$

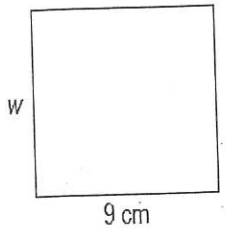
$A = l \times w$

$\frac{64}{16} = \frac{16}{16} \times w$

$4 = w$

The width of the rectangle is 4 cm.

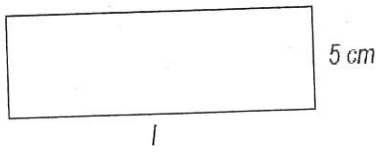
1.) Determine the missing side of the square. Please show your work.



$A = 81 \text{ cm}^2$

$w =$

2.) Determine the missing side of the rectangle. Please show your work.



$A = 65 \text{ cm}^2$

$l =$

3.) Determine the missing side of a rectangle with an area of 144 cm^2 and a width of 8 cm. Please show your work.

4.) Determine the missing side of a rectangle with an area of 480 cm^2 and a length of 32 cm. Please show your work.

5.) Marcus plans to paint a bright green rectangle on the bottom of his pool. He has enough paint to cover an area of 273 square feet. He wants the width of the rectangle to be 13 feet. Determine what the length of the rectangle should be. Please show your work.

6.) Brianna wants to put stickers, to celebrate her birthday, on top of chocolate bar wrappers. The bar is 48 mm wide and has an area of 4128 mm^2. What must be the length of the sticker to cover the top of the bar?

Week 5: Expressions and Equations

Evaluating Algebraic Expressions

1. Substitute the given numbers for the variables
2. Evaluate the expression using the order of operations

ex: evaluate $x + 4y$ for $x = 4$ & $y = 6$

$4 + 4(6)$

$4 + 24 = \boxed{28}$

One-Step Addition & Subtraction Equations

- Addition Equations: Subtract the number being added to the variable from both sides of the equation

ex: $4 + x = 18$

$-4 \quad -4$

$\boxed{x = 14}$

- Subtraction Equations: Add the number being subtracted from the variable to both sides of the equation

ex: $20 = a - 5$

$+5 \quad +5$

$25 = a \rightarrow \boxed{a = 25}$

One-Step Multiplication & Division Equations

- Multiplication Equations: Divide both sides of the equation by the number next to the variable

ex: $\frac{7b}{7} = \frac{28}{7}$

$\boxed{b = 4}$

- Division Equations: Multiply both sides of the equation by the number under the variable

ex: $5 \cdot \frac{n}{5} = 10 \cdot 5$

$\boxed{n = 50}$

Problem Solving

1. Read the problem. Identify the question that is being asked and the key information in the problem.
2. Plan how you are going to solve the problem and estimate the answer.
3. Solve the problem using the strategy of your choice.
4. Check your answer. Make sure your answer is reasonable and compare it to your estimate. Label your answer with appropriate units.

Evaluate each expression for $a = 5$, $b = 12$, $c = 10$, & $d = 2$.

71. $2b - a$	72. $d(ab - c)$	73. $3 + \frac{b}{d}$
74. $\frac{4a}{b + 4d}$	75. $2a^2 - c$	76. $b - c + d$

Solve each one-step equation.

77. $g + 3 = 17$	78. $r - 6 = 7$	79. $6b = 18$	80. $\frac{h}{9} = 3$
81. $5 = f - 8$	82. $48 = 12b$	83. $a + 24 = 83$	84. $17 + x = 23$
85. $10 = \frac{m}{5}$	86. $86.5 = f - 7.63$	87. $\frac{n}{6} = 11$	88. $\frac{3}{4}h = 12$

Unit: KNOWLEDGE of ALGEBRA, PATTERNS, and FUNCTIONS
Objective: Determine the unknown in a linear equation (addition & subtraction).

- **Addition equations:** Subtract the same number from each side of the equation so that the two sides remain equal.
- **Subtraction equations:** Add the same number to each side of the equation so that the two sides remain equal.

Examples:

$b + 3 = 6$	original equation
$-3 \quad -3$	subtract 3 from each side
$b + 0 = 3$	solution
$b = 3$	simplify

$b - 8 = 4$	original equation
$+8 \quad +8$	add 4 to each side
$b + 0 = 12$	solution
$b = 12$	simplify

1.)

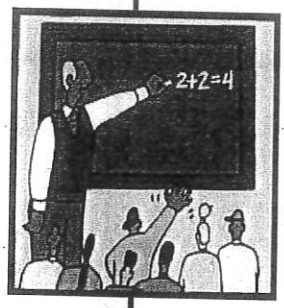
$g + 5 = 12$

2.)

$s - 12 = 29$

3.)

$m + 3.5 = 10.5$



4.)

$k - 5.5 = 8.5$

5.)

$w + 6.25 = 22$

6.)

$g - 3.75 = 49.75$

Unit: KNOWLEDGE of ALGEBRA, PATTERNS, and FUNCTIONS
Objective: Determine the unknown in a linear equation (multiplication & division).

- In a **multiplication equation**, the number by which a variable is multiplied is called the **coefficient**. In the multiplication equation $2x = 8$, the coefficient is 2.
- **Multiplication equations**: Divide both sides by the coefficient so that the two sides remain equal.
- In a **division equation**, the number by which the variable is divided is called the **divisor**. In the division equation $\frac{x}{4}$, 4 is the divisor.
- **Division equations**: Multiply both sides of the equation by the divisor so that the two sides remain equal.

Examples:

$4b = 16$	original equation
$\frac{4b}{4} = \frac{16}{4}$	divide both sides by 4
$1b = 4$	solution
$b = 4$	simplify

$\frac{m}{6} = 11$	original equation
$6 \times \frac{m}{6} = 11 \times 6$	multiply each side by 6
$1m = 66$	solution
$m = 66$	simplify

1.)

$7x = 63$

2.)

$\frac{k}{9} = 8$

3.)

$5b = 3.55$

4.)

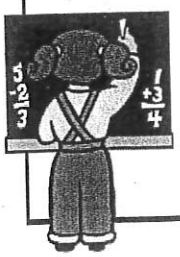
$\frac{n}{7} = 5.55$

5.)

$12m = 84.72$

6.)

$\frac{p}{13} = 2.67$



Week 7: Statistics

Unit: KNOWLEDGE of STATISTICS

Objective: Determine the measures of central tendency (mean, median, and mode) and the range.

A number that helps **describe all of the data** in a data set is a **measure of central tendency.**
The **mean** is the sum of the data divided by the number of pieces of data.
The **median** is the middle number of the ordered data (least to greatest.)
The **mode** is the number or numbers that occur most often.
The **range** is the difference between the greatest and least values of the data set.

Examples:

Jacket Prices ($)			
25	34	39	41
45	52	27	22
56	61	15	27

Find the mean, median, mode, and range of the data.

Mean $= \frac{25 + 34 + 39 + 41 + 45 + 52 + 27 + 22 + 56 + 61 + 15 + 27}{12}$

$= \frac{444}{12} = 37$ The mean price of a jacket is $37.

Median = 15 22 25 27 27 34 39 41 45 52 56 61 (data ordered)

$= \frac{34 + 39}{2} = 36.5$ The median price of a jacket is $36.50.

Mode = **$27** because it is the only piece of data that occurs more than once.

Range = 61 – 15 = **$46**

1.) Find the mean, median, mode, and range for each set of data.

6, 9, 2, 4, 3, 6, 5

2.) Find the mean, median, mode, and range for each set of data.

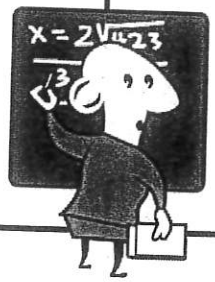
13, 7, 17, 19, 7, 15, 11, 7, 21

3.) Find the mean, median, mode, and range for each set of data.

28, 32, 23, 43, 32, 27, 21, 34

4.) Find the mean, median, mode, and range for each set of data.

157, 124, 157, 124, 157, 139



Exercises: SHOW ALL WORK.
Find the **mean, median, range, and mode** of each of the following data sets. You may use a calculator to identify the mean.

a. 54, 65, 74, 35, 87

b. 54.6, 45.98, 67.4, 55.6, 45.7, 58.9

c. 122, 145, 156, 176, 198, 202

d. 11, 14, 16, 15, 32, 23, 27, 27, 23, 43

e. 6, 7, 8, 4, 6, 5, 8, 3, 6, 8, 5, 4

f. -4, 7, -3, 4, 8, 12, -5, -3, 8, 16, 9

f. 43, 56, 98, 67, 87

h. 12, 15, 14, 18, 33, 32, 24, 26, 27