

To: 6^{th} , 7^{th} , and 8^{th} Grade Parents

From: The Junior High Team - Mr. Richardson, Ms. Griggs, Ms. Klute

June 7, 2023

Dear Parents,

Congratulations to your children for finishing the 2022-23 school year! It has been a joy teaching them and watching them grow these past ten months. We also welcome the incoming 6th graders to junior high as they continue their journey here at St. Anthony of Padua!

Please review the **Junior High Summer Projects**, which are required assignments for each student. The completed work will be <u>due on the first day of school</u> and will count as the first grades for Reading, Language, Math, Science, Social Studies, and Religion.

The **Junior High Supply List** is also provided so that you can begin to purchase materials for the school year. Please note that all Junior High students will be required to use <u>**Chromebooks**</u> instead of iPads for school.

In August/September, we will review Junior High policies regarding the following topics (*found in Parent/Student Handbook online):

- □ Homework/Classwork*
- □ Conduct*
- □ Uniforms*
- **Classroom procedures**
- **D** Rotations and schedules

We appreciate the support you continue to give to your child's education. Please feel free to email any of us with any questions or concerns. You can find our contact information on the Teacher Blogs at <u>stanthonygardena.org</u>. Thank you and enjoy your summer!

St. Anthony of Padua, pray for us!

7th + 8th GRADE SUPPLY LIST 2023-24

MATERIALS FEES

- □ \$5 for Student Planner (from school office)
- □ \$10 student lock (from school office)

CLASSROOM SUPPLIES – will be collected from each student on the 1st day of school

- \square White copy paper (1)
- \Box Tissue boxes (1)
- Clorox wipes (2)
- \square Hand wipes (1)
- □ Emergency kit (labeled large Ziplock bag with
 - 2-3 pint-sized water bottles and 2-3 nonperishable snacks)

 $\label{eq:index} \mbox{INDIVIDUAL SUPPLIES} - \mbox{for students to keep and replace as} needed$

- Chromebook
- Pencil pouch
- □ Wood or mechanical pencils (pack of 12+ lead)
- Pencil sharpener
- Erasers
- \Box Blue/black pens (pack of 5+)
- \square Red pens (pack of 3+)
- □ Highlighters (3)
- □ Colored pencils (pack of 12)
- □ White-out tape
- □ College-ruled paper (500-count)
- □ Scissors
- □ 12-inch Ruler (inches and centimeters)
- \Box Glue sticks (3)
- □ Whiteboard 9"x12"
- Small whiteboard eraser (exp. lonely sock, piece of cloth)
- □ Expo/White board markers (one-8pk)
- □ earbuds

MATH & SCIENCE

- □ (2) white 1-inch 3 ring binder w/ pocket tab dividers
- □ college ruled papers reinforced 500 count 2pk

SOCIAL STUDIES & RELIGION

- □ A Catholic Youth bible
- \Box 2 5-STAR Notebooks with 5 sections (color RED)
- □ pocket folder (color RED)

ENGLISH/LANGUAGE ARTS

- □ Novels (*available online at amazon.com)
 - 7th Grade: The Lion, the Witch, and the Wardrobe by C.S. Lewis (Summer Reading in the Narnia book set) + The Chronicles of Narnia book set by C.S. Lewis
 - 8th Grade: The 7 Habits of Highly Effective Teens by Sean Covey (Summer Reading) + In the Face of Darkness: The Heroic Life and Death of Mother Luisita by Sister Timothy Marie Kennedy, O.C.D.
- □ 1 Spiral 70-page Notebook (color BLACK)
- □ 1¹/₂-inch 3-ring View Binder (color BLACK)
- □ 5-tab Dividers for binder (any color)

MUSIC & PE - Please refer to Mrs. Garcia's and Mrs. Rubalcava's syllabus

WEBSITES TO BOOKMARK ON CHROMEBOOK:

- STAR Testing / Accelerated Reader / Freckle (<u>https://global-zone52.renaissance-go.com/welcomeport</u> <u>al/306665</u>)
- St. Anthony of Padua Teacher websites (<u>http://www.stanthonygardena.org</u>)
- Gradelink (<u>http://gradelink.com</u>)
- Socrative (<u>http://socrative.com</u>)
- Math (<u>https://aaamath.com</u>)
- Social Studies online book (<u>https://student.teachtci.com/student/sign_in</u>)
- Religion prayer app: hallow.com
- Google Classroom





7th Grade 2023 SUMMER READING

Dear Parents and Students of the Class of 2025,

First, congratulations on finishing the 2022-23 school year! I hope all of you enjoy your summer and come back in August refreshed, focused and prepared for the joys and challenges of 7th grade.

As you may know, part of the preparation for 7th grade English Language Arts is summer reading. Every student is required to read the novel *The Lion, the Witch, and the Wardrobe* by C.S. Lewis. The book's content is fitting for this age group, and we will use it at the beginning of the year to review the literary elements. Our discussions and analysis in August and early September will focus on the elements of plot, setting, theme, and characterization that set the foundation for the year's curriculum. *PLEASE NOTE: The Junior High Supply List asks for <u>The</u> <u>Chronicles of Narnia</u> Set, which includes <u>The Lion, the Witch, and the Wardrobe</u>. You do not need to order this separately!*

To be completely prepared for the start of the school year, the students need to arrive at school with the following:

- The Lion, the Witch, and the Wardrobe WORKSHEET PACKET
- Writing Our Catholic Faith Handwriting book p.1-40

<u>These will be the first graded assignments for the year, so please make sure that they are</u> <u>completed neatly and thoroughly.</u>

The students have been briefed on these requirements and understand how to create a plot diagram. The students will use their character notes to create character profiles once they return to school. There will be a comprehension test on the novel as well.

Thank you for your time and support. The students will enjoy the novel and the analysis we do in class. The theme of the story is relevant and the novel is a great opportunity to prepare the students for the upcoming year.

Sincerely,

Ms. Klute

Junior High English Language Arts/6th grade Homeroom

Email: <u>hklute@stanthonygardena.org</u> Website: <u>http://www.stanthonygardena.org/wp/sixth-grade/</u>

Comprehension – Answer the following questions based on Chapter 1.

- 1. Where did the children live before this story began?
- 2. Why was Edmund bad-tempered the first night at the Professor's house?
- 3. How did the adventures begin?
- 4. What first made Lucy realize that something queer was happening in the wardrobe?
- 5. What did she think that convinced her it was safe to go on and explore?
- 6. What was the source of the light in the wood?

Critical Thinking

- 1. What is your first impression of each child's personality?
- 2. What do you think about Lucy's decision to enter the wood alone was it safe, brave, foolish? Explain why you feel as you do.

Comprehension – Answer the following questions based on Chapter 2.

- 1. What does Mr. Tumnus's phrase "Daughter of Eve" mean?
- 2. How did the faun convince Lucy to come to his cave?
- 3. How did he entertain her after they had eaten?
- 4. What happened when Lucy said she had to go?
- 5. What had Mr. Tumnus promised to do with Lucy?
- 6. What did he fear would happen to him if he failed to keep his promise?
- 7. Why did he decide not to keep the promise anyway?

Critical Thinking

- 1. Why do you think Lucy felt comfortable in the faun's cave?
- 2. Why do you think it took Lucy so long to understand the danger she was in?
- 3. What do you think about her behavior toward Mr. Tumnus after she realized what he had planned to do?

Comprehension – Answer the following questions based on Chapter 3.

- 1. Why was Lucy surprised that her siblings hadn't been wondering where she was?
- 2. What did they find when they looked into the wardrobe?
- 3. Why didn't Lucy make up with the others by saying she had just made up the story of her adventure?
- 4. Why should the next few days have been delightful, and why did Lucy not enjoy them?
- 5. Why did she not mean to hide in the wardrobe during hide-and-seek?
- 6. Why did Edmund follow her into the wardrobe?
- 7. What was his first clue that something unusual was happening?
- 8. Why did he think Lucy didn't answer his call?

Comprehension – Answer the following questions based on Chapter 4.

- 1. How did Edmund feel when the queen first invited him to sit with her?
- 2. What did he want as he ate the Turkish Delight?
- 3. What was the queen especially interested in learning about his family?
- 4. What was unusual about this particular Turkish Delight?
- 5. What did the queen say she'd like to do with Edmund?
- 6. What was the condition for her carrying out her idea?
- 7. What did the queen tell Edmund about fauns?
- 8. How did Lucy feel about Edmund having got into Narnia, too?
- 9. How did Edmund feel about it himself?

Critical Thinking

Comprehension – Answer the following questions based on Chapter 5.

| 1. | When did Edmund decide what to do? | |
|----|-----------------------------------------------------------------------|--|
| 2. | How much older than Lucy was Edmund? | |
| 3. | How did Peter say Edmund had always behaved? | |
| 4. | What did Peter and Susan decide to do about their concern over Lucy? | |
| 5. | How did the Professor respond to their account of Lucy's story? | |
| 6. | What was the main reason Susan and Peter didn't believe Lucy? | |
| 7. | What did the Professor say were the only three logical possibilities? | |
| 8. | What did he advise them to do? | |
| 9. | What was unusual about the Professor's house? | |

Comprehension – Answer the following questions based on Chapter 6.

| 1. | What were the first clues that something strange was happening inside the wardrobe? | |
|----|-------------------------------------------------------------------------------------|--|
| 2. | How did the fur coats look on the children? | |
| 3. | How did Edmund give away the fact that he had been in Narnia before? | |
| 4. | What did the children find at the Faun's cave? | |
| 5. | Who was the chief of the secret police? | |
| 6. | Why did the siblings decide not to just go home? | |
| 7. | What was Peter worried about? | |
| 8. | What did Edmund suggest about the robin? | |
| 9. | Why did Peter decide to trust the bird? | |

Comprehension – Answer the following questions based on Chapter 7.

1. What was unusual about the animal the children saw? 2. What did the Beaver say about the trees? 3. How did they know he was a friend? 4. How did the name of Aslan affect each of the children? 5. How long did it take to reach the Beaver's house? 6. What was Mrs. Beaver doing when they arrived? 7. What did they have for dinner? 8. Why was Mr. Beaver pleased that it was snowing again? **Comprehension – Answer the following questions based on Chapter 8.**

- 1. What had happened to Mr. Tumnus?
- 2. Why did Peter believe they had to try to help the faun?

3. Who is Aslan?

- 4. What did Mrs. Beaver say about anyone who could appear before Aslan and not be nervous?
- 5. Where were the children supposed to meet Aslan?
- 6. When was Edmund's absence noticed?
- 7. Why did Mr. Beaver say there was no point in looking for him?
- 8. What did Mrs. Beaver say was the only chance of saving either Edmund or the other children?

Comprehension – Answer the following questions based on Chapter 9.

| 1. | Why hadn't Edmund enjoyed dinner? | | |
|----|---------------------------------------------------------------------------|--|--|
| 2. | When did he actually slip out of the Beavers' house? | | |
| 3. | What were some of the excuses he made up about the Witch in his own mind? | | |
| 4. | What cheered him up as he was walking? | | |
| 5. | How was he able to find his way? | | |
| 6. | What frightened him just inside the courtyard gate? | | |
| 7. | What silly thing did he do when he recovered from his fright? | | |
| 8. | How did the Witch greet him? | | |

Comprehension – Answer the following questions based on Chapter 10.

1. What was Mrs. Beaver doing while the others were bundling up? 2. What hope did she say they had? 3. Why did Mr. Beaver say they should stay down in the valley? 4. What awakened everyone from their sleep in the cave? 5. Why did Mr. Beaver rush out when he heard the noise? 6. What was Father Christmas like, and how did he affect the children? 7. List the gifts he gave to each member of the party.

Comprehension – Answer the following questions based on Chapter 11.

- 1. What did the Dwarf bring Edmund to eat and drink?
- 2. What did the Witch order the wolf to do?
- 3. How did Edmund feel riding in the Witch's sledge?
- 4. Why did the Witch stop suddenly?
- 5. What did she do to the party of animals?
- 6. Why did the sledge stop running well?
- 7. What did the Witch, the Dwarf, and Edmund do when the sledge couldn't go any further?
- 8. What did the Dwarf say had happened?
- 9. How did the Witch respond to his statement?

Comprehension – Answer the following questions based on Chapter 12.

| 1. | What did the children understand had happened when the magic spring began? |
|----|----------------------------------------------------------------------------|
| 2. | Describe the Stone Table. |
| 3. | How did the Beavers and the children feel when they saw Aslan? |
| 4. | How did Lucy think Aslan's face looked? |
| 5. | What did Aslan show Peter? |
| 6. | What did Peter see after he heard the horn? |
| 7. | How did he feel, and what did he do? |
| 8. | What did Aslan send the other creatures to do? |

Comprehension – Answer the following questions based on Chapter 13.

1. What did the Dwarf suggest the Witch should do with Edmund? 2. What did the Witch intend to do with him? 3. How did the Witch and the Dwarf avoid being captured when Edmund was rescued? 4. What did Aslan say when he brought Edmund to his siblings? 5. How did the Witch's appearance affect the group of Aslan's supporters? 6. What did Mrs. Beaver notice about the meeting between Aslan and the Witch? 7. Why had the Witch come?

Comprehension – Answer the following questions based on Chapter 14.

| 1. | Why did Aslan say they had to move camp? | |
|----|----------------------------------------------------------------------------|--|
| 2. | What did Aslan say about his presence in the battle that was sure to come? | |
| 3. | What did the girls see when they got up in the middle of the night? | |
| 4. | What did Aslan say when they asked to go with him? | |
| 5. | How did the Witch's followers react to Aslan's appearance? | |
| 6. | What was done to Aslan before he was put on the Stone Table? | |
| 7. | How did Aslan look just before he was killed? | |

Comprehension – Answer the following questions based on Chapter 15.

- 1. Why couldn't Susan and Lucy untie the ropes on Aslan's body?
- 2. What two things did Lucy notice after it seemed that hours had gone by?
- 3. What were the mice doing?
- 4. What sound did the girls hear, and then what did they see?
- 5. What had the Witch not known?
- 6. How did the girls feel after the wild romp with Aslan?
- 7. When did they reach the Witch's home?

Comprehension – Answer the following questions based on Chapter 16.

- 1. What did Lucy think the Witch's courtyard was like at first?
- 2. What did Aslan do to bring the statues back to life?
- 3. How did they all get out of the Witch's courtyard?
- 4. What did Mr. Tumnus tell Lucy about the giant Rumblebuffin?
- 5. What was the change in the noise that gave Lucy an odd feeling?
- 6. What was happening in the center of the battlefield?

Comprehension – Answer the following questions based on Chapter 17.

- 1. What had Edmund done that had kept the Witch from overpowering Aslan's forces?
- 2. What did Aslan do in the midst of the celebration?
- 3. What names were given to the children as they grew and changed over the years?
- 4. How did they happen to find the lamp post in the wood?
- 5. Why did they decide not to turn back at that point?
- 6. How did the Professor react to their story?



Current Event #1 Date of event: _____

Location of event: _____

Summarize the main points of this current event in your own words. (Complete paragraph)

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Do you think this is an important issue? Why? (Complete paragraph)

Write a prayer concerning this event.



Current Event #2 Date of event: _____

Location of event: _____

Summarize the main points of this current event in your own words. (Complete paragraph)

Do you think this is an important issue? Why? (Complete paragraph)

Write a prayer concerning this event.

MASS REFLECTION #1

DATE: _____

PRE-MASS REFLECTION:

- 1. What are the 2-3 things that are dominating your attention and thoughts today? What can you ask of God in the Liturgy to address these things?
- 2. The Mass is an opportunity to receive forgiveness of venial sins. Are there people who you have hurt in some way by your words, actions, or failure to act?
- 3. The word eucharist means "thanksgiving." What are you most thankful for today?

POST-MASS REFLECTION

- 1. What experiences during the Mass did you find relevant to your current situation and life?
- 2. Reflections on the Liturgy of the Word: What word or phrase jumped out at you in today's reading?
- 3. The name Mass comes from the Latin missa, which means to "go forth" and is taken from the final words of the concluding rite. What are the greatest needs that you see in your everyday life? Empowered with the love of God in the Eucharist, what will you do to help meet those needs?

MASS REFLECTION #2

DATE: _____

BEFORE MASS REFLECTION:

- 1. Has God been at work in your daily life? What evidence is there that God is communicating with you daily? How do you expect this communication to continue during the Liturgy?
- 2. The Mass is an opportunity to receive forgiveness of venial sins. What personal weaknesses can God take over for you today?
- 3. The word eucharist means "thanksgiving." As a celebration of thanksgiving, what has God done for you in your lifetime that you can thank him for today?

POST-MASS REFLECTION:

- 1. What was the holiest experience you had during Mass?
- 2. Reflections on the Liturgy of the Word: What did this reading remind you of in your life at this particular moment?
- 3. The name Mass comes from the Latin missa, which means to "go forth" and is taken from the final words of the concluding rite. What are the greatest needs that you see in your everyday life? Empowered with the love of God in the Eucharist, what will you do to help meet those needs?

Adding Integers

Adding Integers with the Same Signs:

- 1. Add the absolute values of the numbers (without their signs).
- 2. Keep the sign (either positive or negative) of both numbers.

Adding Integers with Different Signs:

- 1. **Subtract** the absolute value of the numbers (without their signs) having the largest number on top.
- 2. Keep the sign of the largest absolute value. (larger number determines the sign)

| | EXAMPLES: |
|-----------------|------------------|
| Same Signs: | Different Signs: |
| 7 + 10 = 17 | 4 + (-9) = -5 |
| -6 + (-5) = -11 | -7 + 18 = 11 |

Find each sum.

| 1. 21 + 15 | 211 + 81 |
|----------------|------------------------|
| 31 + 39 | 48 + (-24) |
| 5. 90 + (-79) | 6. 31 + 96 |
| 7. 25 + (-90) | 8. 15 + 31 + (-20) |
| 9. 8 + 41 + 35 | 10. 18 + (-80) + (-45) |

Subtracting Integers

SAME, CHANGE, CHANGE

When Subtracting ANY Numbers:

- 1. Change any minus sign to a plus.
- 2. Change the sign of the number immediately **after** each minus to its opposite (change a positive number to a negative and vice-versa).
- 3. Follow the rules for adding integers.

| EXAMPLES: | | |
|----------------|----------------------------------|--|
| Two Numbers: | More Than Two: | |
| -4 - 1 → | 6 - 1 - (-3) → | |
| -4 + (-1) = -5 | 6 + (-1) + 3 = 8 | |

Find each difference.

| 1. 39 - 18 | 2. 65 - 72 |
|------------------|------------------------|
| 385 - (-42) | 415 - (-86) |
| 521 - 24 | 615 - (-57) |
| 7. 652 – (-57) | 8. 346 - 865 |
| 98 - (-4) - (-6) | 10. 90 - (-26) - (-48) |

Multiplying/Dividing Integers

When Multiplying ANY Numbers:

1. Multiply or divide the absolute values of the numbers.

- 2. For the **sign of the product/quotient**, follow the rules below. Positive ÷ Positive = Positive
 - Positive x Positive = Positive
 - Negative x Negative = Positive
 - Positive x Negative = Negative
- Negative \div Negative = Positive Positive ÷ Negative = Negative
- Negative x Positive = Negative
- Negative \div Positive = Negative
- If there are an even number of negative integers being multiplied/divided, the product will be positive.
- If there are an odd number of negative integers being multiplied, the product will be negative.

| | EXAMPLES: | |
|------------------------|--------------------|----------------------|
| 2(8) = 16 | $-8 \cdot 6 = -48$ | $16 \div -8 = -2$ |
| $-10 \times -10 = 100$ | 2(-5) = -10 | $\frac{-28}{-4} = 7$ |

Find each product/quotient.

| 18(6) | 210 · -10 |
|--------------------|--------------------|
| 324 ÷8 | 4. $\frac{-21}{7}$ |
| 514(-4) | 696 ÷ -4 |
| 7. $\frac{48}{16}$ | 815 ÷ -15 |
| 9. 5(11)(-3) | 10. 10(-8)(-2) |

Adding/Subtracting Rational Numbers

When Adding/Subtracting ANY fraction:

- 1. Use GCF to get common denominators.
 - Add/Subtract numerators.
 - Denominators stay the same.
- 2. Add/subtract the whole numbers if needed.
- *When subtracting, the largest absolute value goes on top*
- 3. Reduce to lowest terms.
- 4. Use the sign of the number with the larger absolute value.

When Adding/Subtracting ANY numbers in decimal form:

- 1. Line up the place values.
- 2. Use zeros as place holders.
- 3. Integer rules apply.

| EXAMPLES: $\frac{-2}{3} + \frac{5}{9} = \frac{-6}{9} + \frac{5}{9} = \frac{-1}{9}$ $-2\frac{3}{5} - 5\frac{4}{9} = -2\frac{27}{45} + -5\frac{20}{45} = -7\frac{47}{45} = -8\frac{2}{45}$ $\frac{43.29 + 3.127}{43.290}$ $\frac{+3.127}{46.417}$ | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--|
| Find each sum or difference. | | |
| 1. $8\frac{5}{12} - 2\frac{7}{12}$ | 2. $\frac{14}{21} + \frac{-2}{7}$ | |
| 3. $\frac{5}{8} - \frac{2}{3}$ | $41\frac{3}{4} + \frac{-3}{16}$ | |
| 5. $\frac{4}{7} + \frac{-2}{7}$ | 6. $\frac{14}{25} + \frac{2}{5}$ | |
| 7. 85.3 – 37.07 | 8. 27 + 5.19 | |
| 934.1 + (-17.63) | 1018.21 - (-7.3) | |

Multiplying/Dividing Rational Numbers

When Multiplying ANY fractions:

- 1. Rewrite all numbers (whole numbers, mixed numbers, integers) as a fraction.
- 2. Reduce by simplifying a numerator with a denominator.
- 3. Multiply numerators. Multiply denominators.
- 4. Integer rules apply for the sign.

When Dividing ANY fractions:

- 1. Rewrite all numbers (whole numbers, mixed numbers, integers) as a fraction.
- 2. Change the division sign to multiplication and take the reciprocal of the fraction immediately **after** the division sign.
- 2. Reduce by simplifying a numerator with a denominator.
- 3. Follow rules for multiplying fractions.

When Multiplying ANY numbers:

- 1. Multiply the numbers.
- 2. Count how many total numbers after the decimal.
- 3. Put the decimal in so that there are the same amount of numbers after the decimal.
- 4. Integer rules apply for the sign.

When Dividing ANY numbers:

- 1. Move the decimal out of the divisor and then that many times in the dividend.
- 2. Use zeros as place holders.
- 3. Divide and bring decimal straight up in the quotient.
- 4. Integer rules apply for the sign.

| | EXAMPLES: | .7 |
|---------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------|
| $\frac{1}{2} \bullet \frac{-2}{7} = \frac{-1}{7}$ | $-1\frac{1}{9} \div \frac{2}{3} = \frac{-10}{9} \bullet \frac{3}{2} = \frac{-5}{3}$ | 0.63÷0.9 = .9).63 <u>- 63</u> 0 |

Find each product or quotient.

| $1. -\frac{5}{6}\left(-\frac{2}{5}\right)$ | 2. $2\frac{5}{6} \cdot 3\frac{1}{3}$ |
|---------------------------------------------|------------------------------------------------------|
| 3. $-10 \div \frac{3}{8}$ | $4. \frac{-16}{7} \div \left(-\frac{12}{35}\right)$ |
| 5. 85(0.07) | 6. –0.104 ÷ (–0.13) |
| 7. 13.42÷67.1 | 8. 2.001(0.05) |

Evaluating Expressions

When Evaluating ANY Expression:

- 1. **Substitute** each variable with its assigned value.
- 2. **Simplify** the expression using order of operations.
- ★ Be careful! When replacing a variable with a **negative value**, put **parentheses** around the value in the expression.

EXAMPLES:

Evaluate the expression 4xy, if x = -5 and y = -6. 4xy \rightarrow 4(-5)(-6) \rightarrow 180

Evaluate each expression.

| 1. Evaluate 3x when x = -6. | 2. Evaluate -8x when x = -5. |
|----------------------------------------------------------------|----------------------------------------------------------------------|
| 3. Evaluate $0 \div y$ when $y = -12$. | 4. Evaluate $\frac{x}{4}$ when x = -8. |
| 5. Evaluate $\frac{-144}{y}$ when y = -12. | 6. Evaluate $-2(x + y)$ when $x = -1$ and $y = 4$. |
| 7. Evaluate $3(y + x)$ when $x = 6$ and $y = 1$. | 8. Evaluate (a + c) - b when a = 0.4, b = 3.5, and c = 15.61. |
| 9. Evaluate c - d - a when a = 0.4, c =15.61, and d = 0.03. | 10. Evaluate x + y when x = $\frac{3}{8}$ and y = $\frac{3}{4}$. |

Translating Into Expressions

To Translate Sentences into Algebraic Expressions:

- 1. Identify the variable by telling what phrase the variable stands for in the sentence. (This could be the phrase "a number" or it could be the unknown information in the sentence).
- Translate the sentence into related numbers, operations, and variable(s). Usually, the order of the translation will mimic the order of the sentence. (It is helpful to know what words and phrases represent the four main operations, addition, subtraction, multiplication, and division.)

EXAMPLES:

"Seven less than some number""Thirteen dollars plus the cost of food"Let n = some number \rightarrow n - 7Let f = cost of food \rightarrow 13 + f

Identify the variable. Then, translate into an expression.

| 1. A number more than seven | 2. The product of some number and six |
|-------------------------------------|----------------------------------------|
| 3. Some number decreased by twelve | 4. The quotient of ninety and a number |
| 5. Eight less than some number | 6. Twice the number |
| 7. Half of some number | 8. Seventeen more than a number |
| 9. Brian is triple his nephew's age | 10. Maria ran 4½ miles more than Amy |

Two-Step Equations

To Solve Two-Step Equations:

1. **Isolate** the **variable** by using inverse operations

2. **Check** your solution by replacing the variable with the integer.

| Examples: | | | |
|---------------------------------------------------------|---------------------------|-----------------------------------------------------------|------------------------|
| 2x - 10 = 12 | 7x + 9 = -12 | -3x + 4 = 19 | $\frac{x}{3} + 7 = 10$ |
| + 10 + 10 | -9-9 | 44 | <u>-7 -7</u> |
| 2x = 22 | 7 x = -21 | -3x = 15 | $\frac{x}{3} = 3$ |
| $\div 2 \div 2$ | ÷7 ÷7 | ÷-3 ÷-3 | • 3 • 3 |
| $\begin{array}{c} \div 2 \div 2 \\ x = 11 \end{array}$ | $\div 7 \div 7$ x = -3 | $\begin{array}{c} \div -3 \div -3 \\ x = -5 \end{array}$ | • 3 • 3 x = 9 |

Solve and check. Show all of your work.

| 1. 6m + 1 = -23 | 2. 5 + 4d = 37 |
|-------------------------------|----------------------------------------------------|
| 3. 3 -7y = -25 | 4. 6 - 5b = -14 |
| 5. $\frac{11}{12}e + 25 = 47$ | 6. $15 - \frac{1}{7}w = -3$ |
| 7. 8(x + 3) = 72 | 8. $-7(z - 6) = -70$ |
| 90.6(r + 0.2) = 1.8 | $10. \ \frac{-2}{3}(w-\frac{4}{9}) = -\frac{4}{5}$ |

Writing Equations

To Write an Equation:

- Identify a variable. Ex: Let x = the number
 Look for key words: Ex decrease (-), increase (+), is (=)

| Example: | |
|---------------------------------------------------------------|---------------------------------------------------------------------------|
| A number increased by 6 is 24. Let $x =$ the number | Five less than a number times three is -25 Let $x =$ the number |
| x + 6 = 24 | 3x - 5 = -25 |

| Identify the variable. | Translate into an e | quation. |
|------------------------|---------------------|----------|
| A T 1 | | |

| Twice a number decreased by 7 is | 2. Six times a number increased by 8 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 19. | Is -84. |
| 3. Four minus one-fifth a number is -6. | 4. Eight plus two-thirds a number is 12. |
| 5. A company charges \$2 for each balloon in an arrangement and a \$3 delivery fee. You have \$9 to spend. Write an equation for this situation. | It costs \$7.50 to enter a petting zoo. Each cup of food to feed the animals is \$2.50. If you have \$12.50, how many cups can you buy? |
| 7. Jamal and two cousins received the | 8. Mr. Singh had three sheets of stickers. |
| same amount of money to go to a | He gave 20 stickers from each sheet to his |
| movie. Each boy spent \$15. Afterward, | students and has 12 total stickers left. |
| the boys had \$30 altogether. How much | How many stickers were originally on each |
| money did each boy receive? | sheet? |

Solving and Graphing Inequalities

To solve and graph inequalities:

1. I solate the variable by using inverse operations.

2. Graph the solution on the number line.

- A closed circle is used when the point is included. (\leq, \geq)
 - An open circle is used when the point is not included. (\langle , \rangle)

Example:



Solve and graph each inequality:



Geometry

| Area of | square: s ² | Area of trapezoid: $\frac{b_1 + b_2}{2}$ | $\frac{b_2}{b_2} \bullet h$ perimeter: add all sides | |
|---------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------|--|
| Area of | rectangle: b∙h | Area of circle: $\pi \bullet r^2$ | circumference: $2 \bullet \pi \bullet r$ or $\pi \bullet d$ | |
| Area of | parallelogram: b∙h | Area of triangle: $\frac{b \bullet h}{2}$ | Volume of prism: Area of the base • h or lwh | |
| | | 2 | | |
| t | Solve. Show all 1. Find the circumforwhose radius is $2\frac{3}{4}$ the nearest tenth. | work! erence of a circle feet. Round to | 2. Find the perimeter of the composite shape. 8 yd 6 yd | |
| | | | 9 yd 6 yd | |
| k | 3. Find the area of base is 7.5 cm and 1 11 cm. Round to th | a triangle whose whose height is le nearest tenth. | 4. Find the area of a square whose side is $5\frac{2}{3}$ m. | |
| 1 | 5. Find the area of radius of 5 cm. | the square given a | 6. Find the volume of a cube whose side is 14 meters. | |
| F | 7. Find the volume prism. 6 m | of a rectangular 4.5 m | 8. Find the volume of the square pyramid. 10 mm 6 mm | |

Proportions

Setting up:

- 1. Create two equal ratios.
- 2. Label each numerator and denominator so that they match.

<u>Solving:</u>

1. **Cross multiply** by multiplying the two diagonals and set them equal to one another.

2. Solve.

$$\frac{3}{5} = \frac{x}{10} \qquad 3 \cdot 10 = 5 \cdot x$$
$$30 = 5x$$
$$6 = x$$

Solve. Show All Work!

| 1. $\frac{x}{2\frac{1}{3}} = \frac{8}{3}$ | 2. $\frac{6}{2} = \frac{4}{x}$ |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 3. $\frac{5.1}{1.7} = \frac{7.5}{x}$ | 4. $\frac{6.4}{0.8} = \frac{8.1}{x}$ |
| 5. Given the scale 2 cm = 3 m, how long is the scale drawing of a basketball rim that is 16 m. tall? | 6. To tie dye a shirt orange, you need 2 parts red to 5 parts yellow. How much yellow do you need if you have 13 parts red? |
| 7. Find the unit price of a case (12 cans) of soda for \$2.25. | 8. A rectangle is 11.4 in tall and 5.4 in wide. If it is reduced to a height of 5.7 in then how wide will it be? |

Constant of Proportionality

<u>To Find k:</u>

- 1. Find the **unit rate**, *y/x*.
- To Determine if Proportional or Not:
 - 1. Check that every y/x is the same or "constant."

| Cans of Paint (x) | 5 | 10 | 6 | 9 | 2 |
|-------------------------|----|----|----|----|---|
| Bird Houses Painted (v) | 15 | 30 | 18 | 27 | 6 |

15/5 = 3; k = 3

Use the tables below to find the constant of proportionality, k, or to determine whether the relationship is proportional or not.

| 1. Find the constant of proportionality. | 2. Find the constant of proportionality. |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| x(hours) y(cookies) 1 4 2 8 3 12 4 16 | x(weeks) y(years) 2 4 3 6 5 10 9 18 |
| 3. Find the constant of proportionality. | 4. Find the constant of proportionality. |
| x(hours) y(miles) | x(dollars in y(dollars in |
| 1 5 | sales) commissions) |
| 2 10 | \$30 \$3 |
| 3 15 | \$50 \$5 |
| 4 20 | \$80 \$8 |
| | |
| 5. Do <i>x</i> and <i>y</i> have a proportional relationship? Explain your answer. | 6. Do <i>x</i> and <i>y</i> have a proportional relationship? Explain your answer. |
| x(minutes) y(gallons) | x(months) y(dollars) |
| 2 30 | 2 \$48 |
| 3 45 | 3 \$72 |
| 5 60 | 4 \$88 |
| 6 90 | 5 \$120 |
| | |

Graphing Relationships

To Graph and Determine Proportionality:

- 1. Plot each ordered pair, (x, y), by moving right x units and up y units from the origin.
- 2. Check that the points are in a **line** and would include the **origin**, (0, 0).
- 3. If so, the relationship is proportional; if not, then it is not proportional.



Determine whether the relationship between the two quantities shown in each table is proportional by graphing on the plane.



Percents

Setting Up:

- 1. Set up a **proportion** $\frac{\%}{100} = \frac{part(is)}{whole(of)}$
- 2. Labels must match vertically or horizontally.

Solve:

1. Solve by cross multiplying.

| Sydney completed 3 out of her 5 skill she $\frac{3completed}{2} = 9$ | eets, what percent did she complete? %completed |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5total | 100 <i>total</i> |
| Solve. Show All Work! | |
| 1. Express 30% as a fraction in simplest form. | 2. Express $18\frac{4}{5}$ % as a decimal. |
| 3. If 125% of a number is 20, what is the number? | 4. $33\frac{1}{3}$ % of 150 is what number? |
| | |
| 5. What percent of 52 is 6.24? | 6. A bike that is originally \$240 is on sale for 20% off. What is the sales price? |
| 7. In your class, there are 8 girls and 14 boys. What percent of your class is girls? | 8. 272 out of 320 students in your school were surveyed about their favorite soda. What percent of the school population was surveyed? |
| 9. Diane's allowance is \$20 per week. She saves 30% of her allowance. How much does she save each week? | 10. Your Dad bought a concert ticket for \$126. He said that you have to pay 75% of the cost of the ticket. How much did you have to give your Dad? |

ODD ANSWERS

| <u>ADDING I</u> | <u>NTEGERS:</u> | | | | |
|---------------------------|----------------------------|--------------------------------|------------------------------------|-------|-------------------|
| 1) 36 | 3) 38 | 5) 11 | 7) -65 | 9) 84 | |
| SUBTOACT | | CEDC. | | | |
| 1) 21 | 3) -43 | 5) -45 | 7) 709 | 9) 2 | |
| | | | GEDG | | |
| 1) -48 | 3) -3 | 5) 56 | 7) 3 | 9) -1 | 65 |
| ADDING/S | SUBTRACTI | NG RATIO | NAL NUMBI | ERS: | |
| 1) $5\frac{5}{6}$ | 3) $\frac{-1}{24}$ | 5) ² / ₇ | 7) 48.23 | 9) -5 | 1.73 |
| MULTIPLY | <u>/ING/DIVII</u> | DING RATI | ONAL NUM | BERS | <u>.</u> |
| 1) $\frac{1}{3}$ | 3) $-26\frac{2}{3}$ | 5) 5.95 | 7) 0.2 | | |
| | | | | | |
| <u>EVALUATI</u> 1) -18 | 3) 0 | 5) 12 | 7) 21 | 9) 15 | .18 |
| | | EVDDESSI | | | |
| For all of th | ne problems, | , let $n = the$ | e unknown. | | |
| 1) n + 7 | 3) n – 12 | 5) n – 8 | 7) $\frac{1}{2}n$ or $\frac{n}{2}$ | | 9) 3∙n or 3n |
| TWO-STEF | EQUATIO | <u>NS:</u> | | | |
| 1) m = -4 | 3) y = 4 | 5) e = 24 | 7) x = 6 | | 9) r = -3.2 |
| WRITING | EQUATION | <u>IS:</u> , let n = the | unknown. | | |
| | | 1 | | | |
| 1) 2n – 7 = | = 19 3) 4 | $-\frac{1}{5}n = -6$ | 5) 2n + 3 | = 9 | 7) 3(n – 15) = 30 |
| SOLVING | AND GRAP | HING INEO | UALITIES: | | |
| | 1 A 1 | D 1 | | | |
| 1) x < 14 | 13 | Ψ 1 14 15 | | | |
| 3) $x \le 0.6$ | 0.5 | 0.6 0.7 | | | |
| | 75161 | 1771 - 7771 - 1771 | | | |
| 5) x ≤ 32 | 31 | 9 32 33 | - | | |
| $7) \times > 31$ | | | | | |
| / / / / J1.5 | 31,2 | φ 31.3 31.4 | 2 | | |

| <u>GEOMETRY:</u> 1) 17.3 ft or $\frac{121}{7}$ ft | 3) 41.25 cm ² | ² 5) 100 cm ² | 7) 216 m ² |
|-------------------------------------------------------------|---------------------------------|-------------------------------------|-----------------------|
| PROPORTIONS: 1)6 ² / ₉ 3 |) 2.5 | 5) $10\frac{2}{3}$ cm | 7) \$0.1875 |
| <u>CONSTANT OF PR</u> 1) k = 4 3 | OPORTIONALI) k = 5 | <u>TY:</u> 5) Not proportion | al; 60/5 ≠ 15 |
| GRAPHING RELA 1) Proportional; points | FIONSHIPS: align; has (0, 0) | 3) Not proportional; | points do not align |
| PERCENTS: | | | |

| 1) $\frac{3}{10}$ | 3) 16 | 5) 12% | 7) 36. 36 % | 9) \$6 |
|-------------------|-------|--------|--------------------|--------|
|-------------------|-------|--------|--------------------|--------|

Junior High Physical Science Summer Packet

Dear Students,

This is your Science summer packet. You are going to design a model of a bridge. You are to bring in the completed packet with your model on Friday, August 16th. Don't wait until the last minute to do this and have fun! I hope to see some of these at open house. Have a wonderful summer and I will miss you all greatly! God bless.



Here are supplies you may want to have available as you design structures for your Bridge. Having all these supplies on hand is not necessary. Certainly you may have other supply ideas as well. You will need to use at least 5 different materials to build your bridge model.

Pipe cleaners Construction paper Cardboard tubes Popsicle sticks Masking & painters tape Plastic/paper straws

dried sticks toothpicks cotton-tipped sticks small paper cups aluminum foil rubber bands playdough white glue/glue sticks paper clips markers/crayons/pencils newspaper yarn/string





| Name Date: Plan: Bridge Design Sketch. After investigating characteristics of bridges, choose one type and draw a plan for your design. Use up to 5 materials. Label the materials you plan to include. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type of Bridge Created: Math Connection: Explain how you have used math to designed your bridge. How will math be applied as you build the bridge? Consider: Size/Area of the space? Geometry? Measurements? |
| |

| Name Date: | |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Evaluate: Bridge Reflection | Evaluate Improve Create |
| Type of Bridge Created: Give <u>scientific evidence</u> to explain/tell how the design helps to hold weight. | of the bridge |
| | |
| Explain/tell how the structure performed in the weigh on improvements that can be made to strengthen the | nt test. Reflect bridge. |
| Mathematical Application: share how you used mat | |
| | |
| Mathematical Application: Share how you used mat | th in your design. |

| Name Engine skills v Write d worked | eers use critical thinking vhen designing a solution. about what you did as you I through the design cycle. | Evaluate Improve Improve Improve |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| [Investigate:] | | |
| (Plan: | | |
| (Create:) | | |
| [Improve:] | | |
| (Evaluate:) | | |

Hi structural engineer! As you explore different ways to design a bridge that includes **scientific evidence** to enable your structure to hold a load without collapsing, you will find yourself making changes. Keep going! Engineers are always thinking of ways to make their idea better when they design. Write about what you did as you worked through each part of the design cycle.

| [Investigate:] | |
|--------------------------|-----------------|
| [] | |
| [] | |
| [Improve:] | |
| [Evaluate:] | |
| ingineering Design Cycle | © Spivey Sparks |

| Bridge | Building Comp | etition STEAM | Challenge Rubric |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Bridge Structure & Effort | Use of Engineering Design Cycle | Bridge Report, Accuracy, & Conventions |
| Structural Engineer Excellent: 4. Points | The student's 3D bridge structure is <u>exceptional</u> . Their design <u>effectively</u> use 5 or fewer materials. It replicates a researched bridge type, is realistic and artistic. There is space underneath to allow river to flow. The bridge is exceptionally able to bear weight <u>well</u> . The engineer goes beyond expectations . | The student engineer effectively explains in full detail , throughout the design process, how the bridge was created using the engineering cycle. The student fully showcased critical thinking as they problem solved design improvements. | The student's <u>written</u> explanation uses <u>scientific evidence</u> to explain how the bridge design enables it to <u>hold weight</u> . Student <u>accurately</u> explained how math was incorporated into the structure's design. There is <u>consist use</u> of grade level appropriate sentences, grammar, and spelling. |
| Bridge Designer satisfactory: ^{3 Points} | The student's 3D bridge structure is well done. They sufficiently use 5 or fewer materials. It showcases a researched bridge type, is realistic and has artistic qualities. There is space underneath to allow river to flow. The bridge is able to bear <u>some</u> weight. <u>The engineer followed all</u> given directions. | The student engineer explains in basic detai l, throughout the design process, how the bridge was created using the engineering cycle. The student demonstrated <u>some</u> critical thinking as they problem solved design improvements. | The student's <u>written</u> explanation uses <u>basic</u> <u>scientific evidence</u> to explain how the bridge design enables it to <u>hold weight</u> . Student <u>begins</u> to explain how math was incorporated into the structure's deign. The student <u>frequently uses</u> grade appropriate sentences, spelling, and grammar. Errors exist, but do not interfere with meaning. |
| Bridge Watcher ^{Needs Improvement: 2 Points} | The student's 3D bridge structure gives limited thought to a researched bridge type. They use few realistic or artistic details. Their use of 5 or fewer materials could be improved. There may not be space underneath to allow river to flow. The bridge may or may not be able to bear weight. <u>The</u> engineer did not follow all directions. | The student engineer uses few details , throughout the design process, to show how the bridge was created using the engineering cycle. Some phases may be omitted. The student is limited in show how they used critical thinking to problem solve the design. | The student's <u>written</u> explanation leaves out important scientific evidence to explain how the bridge design enables it to hold weight. <u>Few. if any details</u> are used to explain how math was incorporated into the structure's design. The student uses many sentences that are not grade level appropriate. There are <u>several errors</u> that interfere with the flow/meaning. |
| Drive-by Visitor Unsatisfactory: 1 Point | The student's 3D bridge structure is missing many components of a researched bridge type. They lack in realistic or artistic details. Their use of 5 or fewer materials need to be improved. There may not be space underneath to allow river to flow and bridge may not be able to bear weight. <u>The model does not support</u> a well thought out design. The engineer did not follow all directions. | The student engineer uses limited detail , throughout the design process, to show how the bridge was created using the engineering cycle. Some phases may be omitted. The student did not adequately show how critical thinking was used to problem solve the design. | The student's <u>written</u> explanation did not include relevant scientific evidence to explain how the bridge design enables it to hold weight. Details are few and/or <u>do not</u> <u>accurately</u> explain how math was incorporated into the structure's design. There are significant gaps in the information. Grammar and spelling errors prevent understanding to be conveyed . |

Grade: __

Name: _