Eighth-Grade Summer Reading List
All students must read one of the following novels:
Fahrenheit 451 by Ray Bradbury
The Book Thief by Marcus Zusack

Secondary Reading List:
Students must choose ONE secondary novel from the following list:
1984 by George Orwell
*The Diary of a Young Girl* by Anne Frank
The Call of the Wild by Jack London
The Hunger Games (anything from this series) by Suzanne Collins
The War of the Worlds by H.G. Wells
Watership Down by Richard Adam

Students must fill out the attached graphic organizer, comparing and contrasting their two novel choices (while using complete sentences!), and be prepared to discuss the similarities and differences in class when they return on the first day of school.
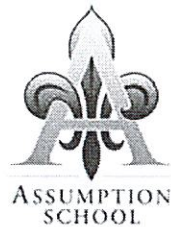
June 2025

Dear Rising 8th Grader,

This year's Summer Math Packet includes several worksheets reviewing topics taught in your 7th grade Math class at Assumption this past year. For each topic, I have included an outline of how to complete the different skills with completed examples on the front of the worksheet. You should show your work for each problem, but if the space on the worksheet is not sufficient, please attach any additional sheets that you use. I ask that you number the problems if you do need to use additional pages to answer the problems. This packet should be completed over the summer, and returned to me on the first day of school in the fall.

I am also including one problem on a separate sheet at the end of the packet that I have labeled "Challenge." I plan to incorporate more problems of the week next year, and this "Challenge" problem is to give you an opportunity to see the type of question that could be presented to your class next year. Like in seventh grade, each problem of the week will directly correspond to a lesson that I am teaching, or may circle back to previously taught skills.

My advice would be to complete 4-6 problems from each included worksheet every week until we return to school so that these skills remain fresh throughout the summer.

I will do my best to check my school email a couple times each week throughout the summer, so if you have any questions or concerns, please feel free to contact me. I look forward to teaching you again next year!

Mrs. Alicia S. Favela
Middle School Math & Science Teacher
Assumption School

alicia.favela@assumption-cs.org

Summer Math
Entering Gr. 8

ASSUMPTION SCHOOL

Name: _____

Answer the following questions <u>after</u> you have completed this packet.

1. **When did you work on the Summer Math packet?** (select the best answer)
   - ☐ I started right after school let out in June!
   - ☐ I worked on it a little each week.
   - ☐ I forgot all about it, and had to do it last night.

2. **Were there any topics that you struggled with?** (check all that apply)
   - ☐ Adding Integers
   - ☐ Subtracting Integers
   - ☐ Multiplying & Dividing Integers
   - ☐ Order of Operations
   - ☐ Adding & Subtracting Rational Numbers
   - ☐ Multiplying & Dividing Rational Numbers
   - ☐ Solving One-Step Equations
   - ☐ Solving Two-Step Equations
   - ☐ Solving Proportions
   - ☐ Solving Percent Problems with Proportions
   - ☐ Solving Percent Problems with Equations
   - ☐ Real-World Percent Problems
   - ☐ The Challenge Problem
   - ☐ No. I remembered how to do all of these.

Adding Integers

- <u>Negative + Negative</u>: Add the absolute values of the two numbers and make the answer negative.

    ex: $-5 + (-9) \longrightarrow 5 + 9 = 14 \longrightarrow$ answer: $\boxed{-14}$

- <u>Negative + Positive (or Positive + Negative)</u>: Subtract the absolute values of the two numbers (larger minus smaller) and take the sign of the number with the greater absolute value.

    ex: $-7 + 12 \longrightarrow 12 - 7 = 5 \longrightarrow 12 > 7$, so answer is positive $\longrightarrow$ answer: $\boxed{5}$

    ex: $6 + (-9) \longrightarrow 9 - 6 = 3 \longrightarrow 9 > 6$, so answer is negative $\longrightarrow$ answer: $\boxed{-3}$

Subtracting Integers

- Keep the first number the same, change the subtraction sign to an addition sign, and change the sign of the second number. Then use the integer addition rules.

    ex: $-3 - 9 \longrightarrow -3 + (-9) = \boxed{-12}$

    ex: $15 - (-8) \longrightarrow 15 + 8 = \boxed{23}$

    ex: $-6 - (-4) \longrightarrow -6 + 4 = \boxed{-2}$

Multiplying & Dividing Integers

Ignore the signs and multiply or divide as usual. Then determine the sign of the answer using the following rules:

- Negative $\cdot$ or $\div$ Negative = Positive
- Negative $\cdot$ or $\div$ Positive (or Positive $\cdot$ or $\div$ Negative) = Negative

    ex: $-3 \cdot (-5) \longrightarrow 3 \cdot 5 = 15 \longrightarrow$ neg $\cdot$ neg = pos $\longrightarrow$ answer: $\boxed{15}$

    ex: $48 \div (-6) \longrightarrow 48 \div 6 = 8 \longrightarrow$ pos $\div$ neg = neg $\longrightarrow$ answer: $\boxed{-8}$

Order of Operations

Parentheses

Exponents

Multiplication & Division (left to right)

Addition & Subtraction (left to right)

Find the sum or difference.

1. $-80 + 77$	2. $77 + 160$	3. $-64 + (-33)$	4. $104 - (-92)$
5. $15 - (-26) - (-39)$	6. $-93 + 191 + (-179)$	7. $18 + (-34) + 52$	8. $-50 - (-93) + (-17)$

Find the product or quotient.

9. $60 \div 12$	10. $-194 \div (-2)$	11. $88 \cdot (-2)$	12. $-12 \cdot 10$
13. $-28 \div (-88) \cdot (-22)$	14. $-56 \cdot 140 \div (-80)$	15. $108 \div (-11) \cdot (-11)$	16. $-84 \cdot (-17) \div 42$

Evaluate the numerical expression. (Be sure to use the order of operations!)

17. $-78 + (-2) \cdot (-56)$	18. $-65 + 6 \div (-3) + 40$	19. $-94 - (84 - 10)$	20. $43 + (-23) - (-57)$
21. $-15 - (-11) + 5 \cdot (-4)$	22. $-26 - (-64) + (-93)$	23. $-84 \div 4 + (-20)$	24. $-56 + (-50) + (-10) \cdot (-9)$

Adding & Subtracting Rational Numbers

Determine whether you should add or subtract using integer rules. Then add or subtract.

- Decimals: Line up the decimal points. Then add or subtract and bring the decimal point down. Use integer rules to determine the sign of the answer.

  ex: $-9.8 + 6.24 \longrightarrow$ neg + pos: subtract $\longrightarrow$ $\begin{array}{r} 9.80 \\ -6.24 \\ \hline 3.56 \end{array}$ $\longrightarrow$ answer: $\boxed{-3.56}$

- Fractions/Mixed Numbers: Find a common denominator and then add or subtract. Borrow or convert an improper fraction answer, if necessary. Use integer rules to determine the sign of the answer.

  ex: $5\frac{3}{4} - \left(-3\frac{7}{8}\right) \longrightarrow$ $5\frac{3}{4}$ $3\frac{7}{8} \longrightarrow$ pos + pos: add $\longrightarrow$ $\begin{array}{l} 5\frac{3}{4} = \frac{6}{8} \\ + 3\frac{7}{8} = \frac{7}{8} \\ \hline 8 \quad \frac{13}{8} \end{array}$ $\longrightarrow$ answer: $\boxed{9\frac{5}{8}}$

Multiplying & Dividing Rational Numbers

Determine the sign of the answer using integer rules. Then multiply or divide.

- Multiplying Decimals: Ignore the decimal points. Multiply the numbers. Then count the decimal places in the problem to determine the location of the decimal point in the answer.

  ex: $-9.23 \cdot (-1.1) \longrightarrow$ neg · neg = pos $\longrightarrow$ $\begin{array}{r} 9.23 \\ \times \ 1.1 \\ \hline 923 \\ 9230 \\ \hline 10153 \end{array}$ $\longrightarrow$ answer: $\boxed{10.153}$

- Dividing Decimals: Move the decimal in the divisor to the end of the number. Move the decimal in the dividend the same number of places and then bring it straight up in quotient.

  ex: $-5.2 \div 0.2 \longrightarrow$ neg ÷ pos = neg $\longrightarrow$ $0.2\overline{)\,52.}^{\,26.}$ $\longrightarrow$ answer: $\boxed{-26}$

- Multiplying Fractions: Convert mixed numbers to improper fractions. Then cross-simplify. Multiply the numerators and multiply the denominators. Simplify if necessary.

  ex: $-1\frac{3}{4} \cdot \frac{6}{14} \longrightarrow$ neg · pos = neg $\longrightarrow$ $\frac{\overset{1}{\cancel{7}}}{\underset{2}{\cancel{4}}} \cdot \frac{\overset{3}{\cancel{6}}}{\underset{2}{\cancel{14}}} = \frac{3}{4} \longrightarrow$ answer $\boxed{-\frac{3}{4}}$

- Dividing Fractions: Convert mixed numbers to improper fractions. Then flip the second fraction to its reciprocal and multiply the two fractions. Simplify if necessary.

  ex: $-\frac{1}{2} \div \left(-\frac{3}{8}\right) \longrightarrow$ neg ÷ neg = pos $\longrightarrow$ $\frac{1}{\underset{1}{\cancel{2}}} \cdot \frac{\overset{4}{\cancel{8}}}{3} = \frac{4}{3} \longrightarrow$ answer: $\boxed{1\frac{1}{3}}$

Find the sum, difference, product, or quotient.

25. $38.61 + 36.841$	26. $1.755 - 1.23$	27. $0.71 \cdot 9.2$	28. $13.12 \div 0.1$
29. $3.651 - (-12.63)$	30. $-3.9 + (-7.6)$	31. $17.6 \cdot 4.3$	32. $6 \cdot (-16.7)$
33. $26.474 - 14.527$	34. $-2.1 + 3.78$	35. $-6.15 \div (-8.2)$	36. $-12.8 \cdot (-4.88)$

Find the sum, difference, product or quotient.

37. $15\frac{1}{2} + 15\frac{1}{4}$	38. $18\frac{11}{20} - 17\frac{1}{2}$	39. $2\frac{1}{4} \cdot 1\frac{4}{5}$	40. $3\frac{1}{2} \div 1\frac{3}{7}$
41. $3\frac{1}{3} - 5\frac{1}{9}$	42. $5 \cdot (-1\frac{2}{5})$	43. $-4\frac{2}{3} + (-1\frac{3}{4})$	44. $-\frac{5}{6} \div (-2\frac{1}{6})$
45. $9 \div (-4\frac{1}{2})$	46. $-18 + 3\frac{4}{5}$	47. $-5\frac{2}{3} \cdot (-2\frac{5}{6})$	48. $-5\frac{3}{4} - (-3\frac{7}{8})$

Solving One-Step Equations

- Cancel out the number on the same side of the equation as the variable by using the inverse operation. (Addition/Subtraction; Multiplication/Division). Be sure to do the same thing to both sides of the equation!

ex: $6x = -18$ $\longrightarrow$ $\dfrac{6x}{6} = \dfrac{-18}{6}$ $\longrightarrow$ answer: $\left(x = -3\right)$

ex: $y + 23 = -9$ $\longrightarrow$ $\begin{array}{c} y + 23 = -9 \\ -23 \quad -23 \end{array}$ $\longrightarrow$ answer: $\left(y = -32\right)$

ex: $\dfrac{h}{3} = 4$ $\longrightarrow$ $3 \cdot \dfrac{h}{3} = 4 \cdot 3$ $\longrightarrow$ answer: $\left(h = 12\right)$

ex: $w - 13 = -5$ $\longrightarrow$ $\begin{array}{c} w - 13 = -5 \\ +13 \quad +13 \end{array}$ $\longrightarrow$ answer: $\left(w = 8\right)$

Solving Two-Step Equations

- Undo operations using inverse operations one at a time using the order of operations in reverse. (i.e.: undo addition/subtraction before undoing multiplication/division)

ex: $7x - 4 = -32$ $\longrightarrow$ $\begin{array}{c} 7x - 4 = -32 \\ +4 \quad +4 \end{array}$ $\longrightarrow$ $\dfrac{7x}{7} = \dfrac{-28}{7}$ $\longrightarrow$ answer: $\left(x = -4\right)$

ex: $\dfrac{J}{5} + 13 = 15$ $\longrightarrow$ $\begin{array}{c} \dfrac{J}{5} + 13 = 15 \\ -13 \quad -13 \end{array}$ $\longrightarrow$ $5 \cdot \dfrac{J}{5} = 2 \cdot 5$ $\longrightarrow$ answer: $\left(J = 10\right)$

ex: $\dfrac{b + 7}{3} = -2$ $\longrightarrow$ $3 \cdot \dfrac{b + 7}{3} = -2 \cdot 3$ $\longrightarrow$ $\begin{array}{c} b + 7 = -6 \\ -7 \quad -7 \end{array}$ $\longrightarrow$ answer: $\left(b = -13\right)$

Solve the one-step equation.

49. $19 + j = -34$	50. $m - 26 = 13$	51. $\frac{x}{5} = -3$	52. $12f = 216$
53. $g - (-31) = -7$	54. $\frac{h}{9} = 13$	55. $b + (-3) = -9$	56. $-4w = -280$

Solve the two-step equation.

57. $5m - 3 = 27$	58. $7 + \frac{y}{2} = -3$	59. $4 + 3r = -8$	60. $\frac{1}{2}p - 4 = 7$
61. $\frac{k+8}{3} = -2$	62. $\frac{f}{5} - (-13) = 12$	63. $-15 - \frac{g}{3} = -5$	64. $-8 + 4m = 2$

Solving Proportions

- Set cross-products equal to each other and then solve the one-step equation for the given variable.

ex: $\dfrac{5}{b}=\dfrac{4}{10}$ $\longrightarrow$ $5\cdot 10 = 4b$ $\longrightarrow$ $\dfrac{50}{4}=\dfrac{4b}{4}$ $\longrightarrow$ answer: $\boxed{b = 12.5}$

Solving Percent Problems with Proportions

- Set up and solve a proportion as follows: $\dfrac{\%}{100}=\dfrac{part}{whole}$

ex: 25 is what percent of 500? $\longrightarrow$ $\dfrac{x}{100}=\dfrac{25}{500}$ $\longrightarrow$ answer: $x = \boxed{5\%}$

ex: What is 15% of 88? $\longrightarrow$ $\dfrac{15}{100}=\dfrac{x}{88}$ $\longrightarrow$ answer: $x = \boxed{13.2}$

ex: 18 is 30% of what number? $\longrightarrow$ $\dfrac{30}{100}=\dfrac{18}{x}$ $\longrightarrow$ answer: $x = \boxed{60}$

Solving Percent Problems with Equations

- Translate the question to an equation and then solve. (Be sure to convert percents to decimals or fractions.)

ex: 20 is 40% of what number? $\longrightarrow$ $20 = 0.4x$ $\longrightarrow$ answer: $x = \boxed{50}$

ex: 8 is what percent of 32? $\longrightarrow$ $8 = 32x$ $\longrightarrow$ $x = 0.25$ $\longrightarrow$ answer: $\boxed{25\%}$

ex: What is 25% of 88? $\longrightarrow$ $x = 0.25\cdot 88$ $\longrightarrow$ answer: $x = \boxed{22}$

Real-World Percent Problems

(This is just one way of many to solve real-world percent problems)

- <u>Tax</u>: Find the amount of tax using a proportion or equation. Then add the tax to the original amount to find the total cost.

- <u>Discount</u>: Find the amount of the discount using a proportion or equation. Then subtract the amount of discount from the original price to find the sale price.

Solve the proportion.

| 65. $\dfrac{h}{6} = \dfrac{20}{24}$	66. $\dfrac{5}{7} = \dfrac{c}{14}$	67. $\dfrac{6}{8} = \dfrac{21}{b}$	68. $\dfrac{30}{j} = \dfrac{26}{39}$
69. $\dfrac{5}{k} = \dfrac{15}{20}$	70. $\dfrac{32}{112} = \dfrac{a}{14}$	71. $\dfrac{16}{7} = \dfrac{18}{g}$	72. $\dfrac{w}{60} = \dfrac{15}{200}$

Solve the percent problem.

73. Find 15% of 85.	74. 6 is 75% of what number?	75. 40 is what percent of 320?	76. What number is 20% of 45?
77. DISCOUNT. A $58 camera is on sale for 20% off. Find the sale price.		78. TAX. Find the total price of a $14.00 shirt including the 7% sales tax.	

Challenge: Summer Job

A neighbor pays you and two friends $90 to paint her garage. You divide the money three ways in the ratio 2 : 3 : 5.

a. How much does each person receive?

b. What is one possible reason the money is not divided evenly?
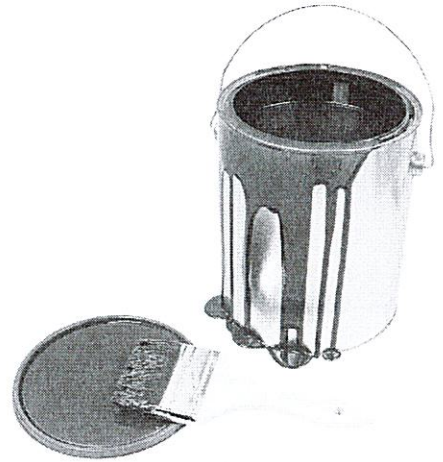
Middle School (6th-8th grade) Supply List

Religion:

- Notebook/journal
- Rosary beads

Math/Science:

- One 1" three-ring binder to be shared between the two classes
- Loose leaf three-hole paper

English Literature/Language Arts:

- Two 1" three-ring binders
- Loose leaf three-hole paper
- Colored Pencils (12 Crayola colored pencils are sufficient
- Scotch Tape (or similar brand)
- Glue sticks (2)
- Highlighters, three different colors (3) for annotating

Social Studies:

- One 1" three-ring binder
- Loose leaf three-hole paper

General Purpose:

- Dry Erase/Expo Markers (Package of at least two markers)
- Dry Erasers
- Flash drive
- Pencils and erasers*
- Letter-sized Milk crate for extra storage
- Avery plastic dividers
- Large tissue box for classroom donation (3 boxes per student)
- Paper towels for classroom donation (1 per student)
- Clorox or Lysol wipes or paper towels and spray cleaner for classroom donation (1 per student)
- A positive attitude and the willpower to work hard!

Pens are not needed and will not be allowed for use on homework or quizzes in the sixth- and seventh-grade classroom

ART

Students will need to supply their own art materials in a labeled Ziploc bag. All bags will remain in the art room for their use only.

· 2 glue sticks
· 3 pencils, #2
· 1 hand pencil sharpener
· 1 pink pearl eraser
· 2 fine point black Sharpie marker
· 1 ultra-fine point back Sharpie marker
· 1 box of 24 color crayons
· 1 set of 36 color pencils
· 1 set of markers any kind (3rd-8th)
· 1 gallon size Ziploc bag

Please put all art items in the Ziploc bag. Label it with your child's name and grade and bring it to school on the first day.

Thank you, Mrs. Tutela