Summer for Rising 8th Graders

Name_____

Dear Students and Parents,

I am very excited about our upcoming year! I have created this math packet for you to work over the summer. It contains problems that I think you will know based on the things that you have learned during this school year. It is designed to review the math skills needed to be successful in 8th Grade. Students are NOT allowed to use a calculator on any portion of this packet. Please show all your work in order to receive full credit for your hard work!

Please do your very best on this packet. It will count as your first test grade. It is due on the Second full day of school, Tuesday, August 9th.

I can't wait to see you in the fall!

Student Signature_____

Parent Signature_____

See you soon!

Mrs. Tanner

Decimal Operations

1. 9.372 + 3.029

2. 11.322 – 3.825

3. 18.23 – 5.409 + 2.55

4. 2.35 * 7.11

5. 1.023 * 3.5

6. 23.25 ÷ 0.7

7. 0.54723 ÷ 2

8. 8.752 ÷ 0.12

For #9-12 simplify the fraction by finding common factors & eliminating them.

9. $\frac{4}{10}$

10. $\frac{24}{40}$

11. $\frac{81}{27}$

12. $\frac{9}{21}$

For #13-16, simplify each answer as much as possible by cross cancelling factors.

13. $\frac{4}{5} * \frac{10}{18}$

14. $\frac{8}{9} * \frac{3}{4} * \frac{10}{6} * \frac{12}{15}$

15. $\frac{27}{38} \div \frac{3}{7}$

16. $\frac{35}{38} \div \frac{5}{19}$

Order of Operations

Simplify each expression using PEMDAS!

1) $2 * 6 \div 4 + 7 - 8 * 3 + 77 \div 11$

2) $72 \div 12 + 2^2 - 5 * 2 + 3 + 2 * (6 - 5)$

3) $7 * (12 - 5) + 9 \div (-3) + 7 * (-2)$

4) $13 + 2x - 5 - 8x + 7 * (4x + 1)$

5) $-5x - 8 + (8 \div 2) + 7 * 6$

6) $3x - 6 + 4 * 8 - 3x + 2y - 90 \div 5$

Absolute Values & Negative Integer Operations

Simplify each statement as much as possible.

1. $|-4|$
2. $-|-5|$
3. $(-3)^2$
4. -5^3

5. $-4 * 5$
6. $-7 + 3$
7. $-8 * -7$
8. $-28 \div -7$

9. $-42 + 27$
10. $-22 - (-8)$
11. $\frac{-42}{7}$
12. $37 - 83$

13. $-42 \div 2 + (7 * 3) + 8 - (-5) - 4 * 2$

14. $|-2| + 8^2 - (-3)^2 + 7 * 2 - 22 \div 2$

15. $|-4^3| - 8 * 7 + (-(-(-2) + \left(-\frac{48}{6}\right) + (-3) * (-2)$

Operations with Fractions

Reduce answers as much possible by finding common factors.

#1. $\frac{2}{5}+\frac{3}{7}$ **#2.** $\frac{4}{28}-\frac{7}{9}$ **#3.** $3\frac{1}{3}+4\frac{7}{8}$ **#4.** $-\frac{7}{25}-\frac{8}{15}$

#5. $\frac{2}{25}*\frac{15}{22}$ **#6.** $\frac{27}{31}*-\frac{62}{81}$ **#7.** $-\frac{10}{21}*-\frac{49}{35}$ **#8.** $4\frac{1}{3}*5\frac{2}{5}$

#9. $-\frac{42}{55}\div\frac{28}{11}$ **#10.** $\frac{25}{28}\div\frac{15}{32}$ **#11.** $-\frac{8}{5}\div\frac{6}{35}$ **#12.** $\frac{125}{128}\div\frac{65}{72}$

13. You have $8\frac{4}{5}$ total cups of lemonade, and you want to share it with your friends. Each friend gets $\frac{1}{10}$ of a cup to drink.
How many friends do you have?

14. You have $10\frac{2}{7}$ ounces of candle wax to make an army of tiny, beautiful-smelling candles. You are able to make a total of 12 candles from the wax. How much wax is in each candle? (Hint: write an equation first.)

Name_____ Period: _____

Packet 17: Solving Two-Step Equations

Goal: Get the variable on one side of the equation by itself.

Steps to solving a two-step equation:

1. **Do the inverse operation for addition or subtraction.**
2. **Do the inverse operation for multiplication or division.**
3. **Check your answer**

Let's Try It!

1) $4x-8=16$	2) $\frac{y}{12}-5=11$
3) $3.2x+2.6=-23$	4) $-6.85+\frac{m}{4}=-11$

Two-Step Equation Practice

Solve and check the equations below. Show all your work.

1.) $\frac{x}{4}+10=1$	2.) $0.7t-3.2=1.7$	3.) $10-5m=45$
4.) $3x+9=27$	5.) $-5.6=\frac{h}{5}+12.2$	6.) $-3x-10=-46$
7.) $174=48n-18$	8.) $-61=7y-26$	9.) $\frac{y}{5}-9=11$