

# PACKET FOR STUDENTS ENTERING PRE-ALGEBRA

June 2016

Dear Parents/Guardians:

As your children's 7<sup>th</sup> grade school year comes to an end, thoughts of sleeping late and spending time with friends are, no doubt, on their minds. We hope your children will have a fun-filled and relaxing summer. We also hope they will spend just a little time reviewing and maintaining the math skills they acquired this year.

To ensure that your children have a successful start in their Pre-Algebra class, we have prepared a Summer Math Assignment that will be completed by students prior to the start of classes in September. They will be assessed on the concepts in the packet at the start of the school year. All the objectives included in the assignment have been taught to your children in 7<sup>th</sup> grade.

Please encourage your child to work on the assignment consistently throughout the summer. Thank you for your help and cooperation.







Have a wonderful summer!

Mrs. Delia & Mrs. Garrido

## COMPARING & ORDERING INTEGERS

You can use a number line to order integers. On a number line, a number to the left is less than a number to the right.

Replace each  with < or > to make a true sentence.

1. $-5$  $-6$	2. $17$  $-18$
3. $-45$  $-43$	4. $15$  $-2$
5. $-19$  $21$	6. $-16$  $-28$

Order the integers from least to greatest.

1. 8, -3, 6, -4, 5	2. 17, 12, -14, -6, 5, -3, -2
3. -7, 8, -11, 14, 16, -12	4. 0, -5, -2, 3, 8, 10, -16

# ORDER OF OPERATIONS

When you evaluate an expression, the **order of operations** ensures that the expression always has only one value. The order of operations tells you which operation to use first.

Evaluate each expression.

1. $4^2 \div 2 \cdot 3$	2. $(10 + 12) \div 11$
3. $54 \div 6 + 2^4$	4. $7^2 - (2 \cdot 3)$
5. $3^3 \cdot 2 + 64 \div 4^2$	6. $9 - 2^3 \cdot 4$

## OPERATIONS WITH FRACTIONS

1. $\frac{3}{7} + \frac{9}{14}$	2. $\frac{1}{4} + \frac{3}{8}$
3. $\frac{7}{10} - \frac{1}{4}$	4. $\frac{1}{3} - \frac{1}{4}$
5. $\frac{3}{4} \cdot 3$	6. $\frac{5}{8} \cdot \frac{2}{3}$
7. $\frac{2}{3} \div \frac{1}{2}$	8. $5 \div \frac{1}{2}$
9. $\frac{3}{7} \div \frac{7}{3}$	10. $\frac{1}{3} \cdot \frac{3}{4} \cdot \frac{4}{5}$

## ADDING INTEGERS

Evaluate each expression. Do not use a calculator.

1. $8 + 15$	2. $-7 + 7$
3. $8 + (-2)$	4. $-2 + 3$
5. $-6 + (-3)$	6. $-10 + 12$
7. $-9 + 5$	8. $-45 + (-22)$
9. $-32 + 17$	10. $26 + (-51)$

## SUBTRACTING INTEGERS

Evaluate each expression. Do not use a calculator.

1. $6 - (-3)$	2. $-9 - 4$
3. $-4 - (-8)$	4. $-2 - (-1)$
5. $-12 - 6$	6. $-10 - 13$
7. $9 - 15$	8. $-45 - 15$
9. $-32 - (-7)$	10. $50 - 75$

## MULTIPLYING INTEGERS

Evaluate each expression. Do not use a calculator.

1. $8(-3)$	2. $-9(5)$
3. $-7(-6)$	4. $-12(4)$
5. $11(6)$	6. $-15(3^2)$
7. $-5(-8)$	8. $-4(-2)^2$
9. $-8(4)$	10. $-4(-5)$

## DIVIDING INTEGERS

Evaluate each expression. Do not use a calculator.

1. $16 \div (-2)$	2. $-8 \div (-4)$
3. $-48 \div 6$	4. $32 \div (-4)$
5. $-11 \div (-11)$	6. $-15 \div 3$
7. $\frac{-9}{3}$	8. $\frac{54}{-9}$
9. $\frac{-44}{-11}$	10. $\frac{-72}{-9}$



## POWERS AND EXPONENTS

When you multiply two or more numbers, each number is called a **factor** of the product. When the same factor is repeated, you can use an **exponent** to simplify the notation. An exponent tells you how many times a number, called the **base**, is used as a factor. A **power** is a number that is expressed using exponents.

1. Write $14 \cdot 14 \cdot 14 \cdot 14 \cdot 14$ in exponential form.	2. Write $d \cdot d \cdot d \cdot d$ in exponential form.
3. Write $2^5$ as a product.	4. Write $x^6$ as a product.
5. Evaluate $12^3$ .	6. Evaluate $15^2$ .

# ONE-STEP EQUATIONS

Solve each equation.

1. $a + 5 = 11$	2. $22 = j - 2$
3. $b - 10 = 2$	4. $\frac{f}{6} = 12$
5. $3g = 36$	6. $\frac{g}{2} = 15$
7. $49 = -7x$	8. $x + 15 = -15$

## MULTI-STEP EQUATIONS

Solve each equation.

1. $2x - 4 = 16$	2. $-x + 2 = -14$
3. $2(x - 4) = -8$	4. $9 + \frac{x}{5} = -3$
5. $9 - 7x = -26$	6. $-4x = 4 + 8x$
7. $7x + 8 - 9x = 22$	8. $31 + 14x = 7x - 18$