

## Sail into Summer with Math!



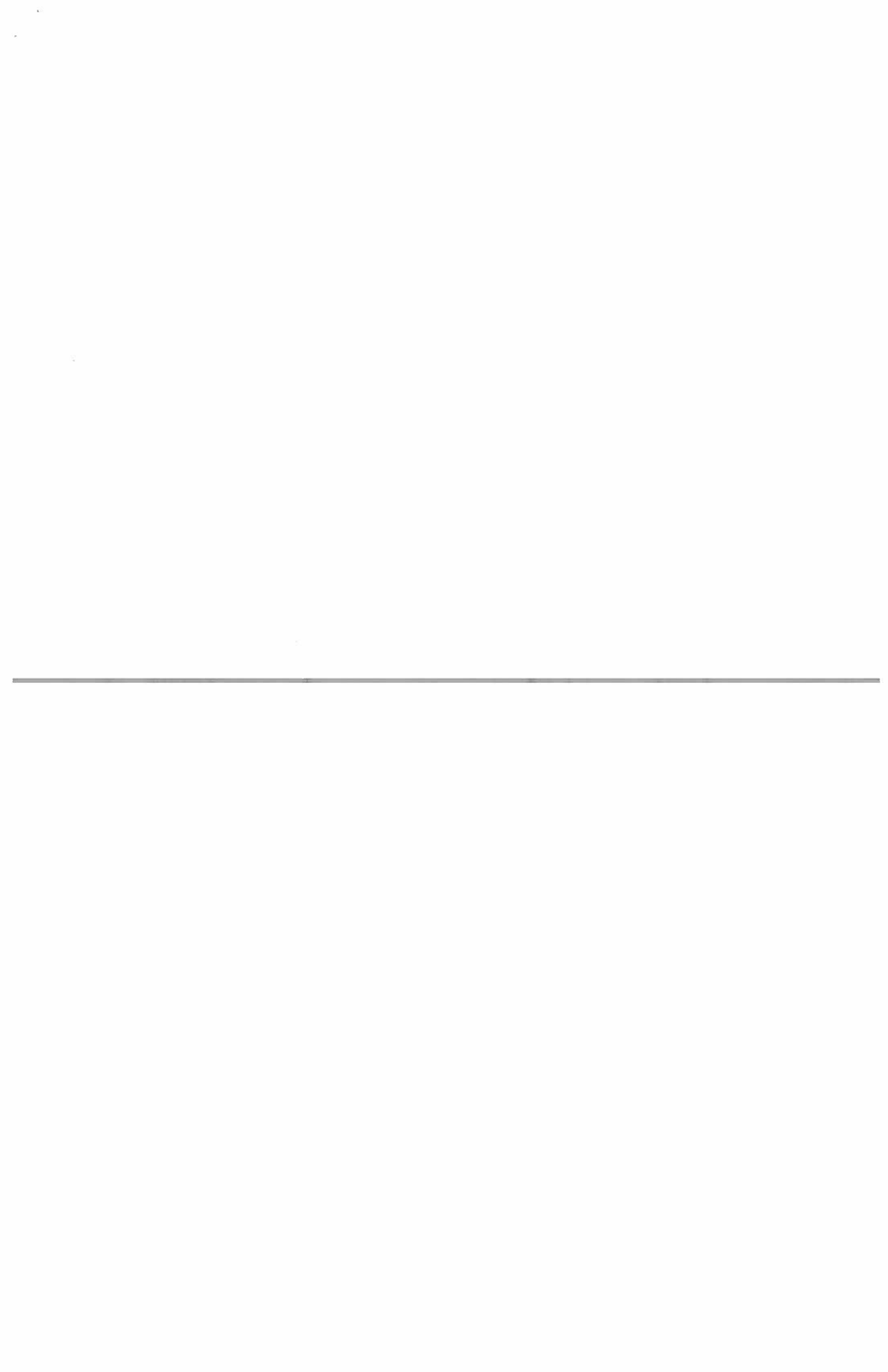
## Taking Mathematics from the Impossible to the POSSIBLE

This summer math packet was developed to provide students in Algebra 1 through Pre-Calculus an opportunity to review grade level math objectives and to improve your math performance.

One goal is to promote and increase math performance at all grade levels. Completing the summer math packet allows each student and parent at C.F. Vigor High School the ability to work together to achieve this goal. Students who complete the summer math packet will be able to:

- Increase retention of math concepts,
- Work toward closing the gap in student performance,
- Apply math concepts to performance tasks, and
- Successfully complete your grade level mathematics class.





1. Simplify the expression  $(-7) + 6 + [-(2 - 3)]$ .

2. Simplify the expression  $-[-(4 + 3)]$ .

3. Simplify:  $-(-2) - (-8) + (-6)$     [A] 16    [B] -12    [C] 4    [D] -16

4. Evaluate the expression  $35 - (-x) - |15|$  when  $x = -5$ .

5. Find the sum of the matrices  $\begin{bmatrix} 2 & 0 \\ -1 & 4 \\ 3 & -2 \end{bmatrix} + \begin{bmatrix} -3 & 0 \\ -4 & 1 \\ 5 & -4 \end{bmatrix}$ .

6. Find the difference of the matrices  $\begin{bmatrix} 2 & 9 \\ 7 & 4 \end{bmatrix} - \begin{bmatrix} 8 & 3 \\ -2 & 1 \end{bmatrix}$ .

7. Find the product:  $-9 \cdot (-6)$

8. Evaluate the expression  $7x - 3x^2$  when  $x = -2$ .

9. Divide:  $54 \div (-6)$

10. Simplify the quotient  $\frac{28x - 14}{7}$ .

11. Simplify the expression  $3(2 - x) - 2(3 - x)$ .

12. Simplify the expression  $x(2 - x) - x(3 - x)$ .

13. Remove parentheses by applying the Distributive Property.  $17x(3x - 5)$

Solve the equation:

14.  $3x + 5 = 26$

15.  $2x - |-5| = 23$

Solve:

16.  $\frac{9}{11}y - 45 = 0$

Solve:

17.  $x+1 = -4x-1$

Solve the equation:

18.  $(5 \div 2) - x(x+1) = x(2-x)$

19.  $7x - 29 - 21x = 3 - (12 + 2x)$

20. Solve the equation Round your result to two decimal places.  $142y - 12.5 = 64y - 13.7$

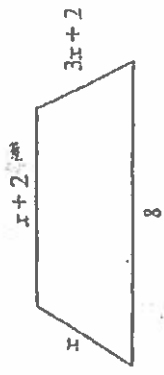
21. Solve for  $x$  rounded to two decimal places:  $-3.6x + 2.9 = -3.2$

22. Solve for  $t$ :  $2 = t - 7s$

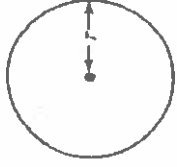
23. Solve  $6x - 5y = 6$  for  $y$ .

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24. The trapezoid below has a perimeter of 20. Solve for  $x$ .



25. The circle below has a circumference of 21.54 inches. Approximate the radius of the circle to two decimal places.



1. Which point,  $\left(\frac{5}{2}, 3\right)$  or  $\left(\frac{3}{2}, 20\right)$ , is on the graph of  $2x - \frac{2}{3}y = 3$ ?

2. Complete the table.

$x$	-6	-4	-2	0	2
$y = -\frac{1}{2}x - 1$					

3. State the  $x$ - and  $y$ -intercepts of  $y = -8x + 3$ .

4. Graph the linear equation by finding  $x$ - and  $y$ -intercepts.  $2x - y = -2$

5. Plot the points and find the slope of the line passing through the points  $(-4, 2)$  and  $(4, -3)$ .

6. Find the slope of the line passing through the points  $A(-5, 8)$  and  $B(7, -7)$ .

7. Find the slope of the line through the points  $(-1, -3)$  and  $(-1, 7)$ .
8. Find the *rate of change* between the two points  $(10, 42)$  and  $(13, 75)$  and give the *unit of measure*.  $x$  is measured in hours;  $y$  is measured in degrees.
9. Solve for  $y$ .  $4x - 5y = 0$
10. Find the slope and  $y$ -intercept of the line.  $y = 7x - 15$
11. Find the slope and  $y$ -intercept of the line  $9x + 3y = 54$ .
12. Write in slope-intercept form and sketch the line.  $3x - y - 2 = 0$



Solve:

13.  $|x-9| = 2$

14.  $2 = |4+3x|$

15. Solve the equation algebraically.  $3+|x-3| = 7$

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