

West Essex Middle School
Math 8 Summer Packet

Math 8 uses the Connected Math Program, a standard-based approach that encourages problem-solving, communication of ideas, application of math to everyday situations, and focus on computational skills. Strategies are designed not only to encourage all students, but to allow for differentiation to address the needs of all students. Math 8 seeks to build upon those mathematical skills introduced in seventh grade. It is a foundation for the skills and abstract thinking necessary for ninth grade algebra. **The completion of this summer packet is required.**

To be successful in Math 8, you will need:

- A lot of pencils
- A red pen (or any other color besides black/blue)
- A binder with loose-leaf paper
- Scientific Calculator TI-30

Over the summer, it is your responsibility to review and master the concepts in this packet.

- You will be required to hand in the completed packet on THE SECOND DAY OF SCHOOL (**August 31st**). No exceptions.
- Each page is worth 2 points homework grade (You must show **all** work to receive full credit)
- This packet should be done **WITHOUT** a calculator.
- Use Khan Academy for assistance.

| <u>Topic</u> | <u>Suggested Date of Completion</u> |
|------------------------|--|
| Order of Operations | 7/8/23 |
| Evaluating Expressions | 7/18/23 |
| Combining Like Terms | 8/2/23 |
| Solve Proportions | 8/15/23 |
| Solving Equations | 8/25/23 |

Directions: Please answer all questions and show all work to receive full credit. Box off final answer. NO CALCULATOR!

Evaluate each Expression ([Order of Operations Videos](#))

1) $\frac{12}{6-5+5}$

2) $1 - (4 - 2^2)$

3) $\frac{8}{6-4} - 2$

4) $5 - 2 - 2 + 3$

5) $4 + 6 - 6 - 2$

6) $3 + 2 + 6 + 2$

7) $\frac{10-4}{5-2}$

8) $\frac{18}{6-4+1}$

Evaluate each using the variables given ([Substitute Variables and Simplify Videos](#))

9) $4 - (z - (y - z))$; use $y = 4$, and $z = -2$

10) $\frac{q(p+r)}{4}$; use $p = -5$, $q = 2$, and $r = 1$

11) $p + \left(\frac{q}{2}\right)^3$; use $p = -4$, and $q = 2$

12) $z - x((-3) - y)$; use $x = -5$, $y = 1$, and $z = 2$

13) $3 + z(y - z)$; use $y = 2$, and $z = -6$

14) $y^2 + z - z$; use $y = -6$, and $z = -5$

Simplify each Expression ([Combine Like Terms Videos](#) / [Distributive Property Videos](#))

15) $6 + 8(2r - 4)$

16) $6 + 2(0.5p + 8)$

17) $6(6n + 7) - 1$

18) $\frac{3}{2}(6 - 12p) + 4p$

19) $7 + \frac{5}{4}(4n + 8)$

20) $6(8v - 8) - 3v$

Solve each Proportion ([Solving Proportions Videos](#))

21) $\frac{10}{8} = \frac{n}{10}$

22) $\frac{7}{5} = \frac{x}{3}$

23) $\frac{4}{3} = \frac{8}{x}$

24) $\frac{7}{n} = \frac{8}{7}$

25) $\frac{n}{2} = \frac{5}{20}$

26) $\frac{3}{x} = \frac{7}{6}$

Solve each Equation ([Solving Equations with Variables One Side Videos](#))

27) $14 = 3 + 2x$

28) $6 - x = 9$

29) $0.25(8x - 16) = 6$

30) $\frac{x}{3} = -9$

31) $\frac{9}{3}x + \frac{12}{6}x + 6 = -15$

32) $2(2x + 3) - 7x + 9 = 18$