Math Summer Assignment for

Algebra 1

Wall Township Math Department
Optional Summer Assignment

★ This summer assignment is intended to prepare you for the math course above. ★

Skill 1: Evaluating Expressions.

Helpful Video Link:
➔Examples of evaluating variable expressions

Practice: Evaluate the expression with the given values.

1) $m = 9$ and $n = 7$ $6m + n$	2) $n = 4$ $n^2 + 8$	3) $x = -2$ $x^2 - 4x + 8$

Skill 2: Translating phrases

Helpful Video Link:
➔Writing Algebraic Expressions

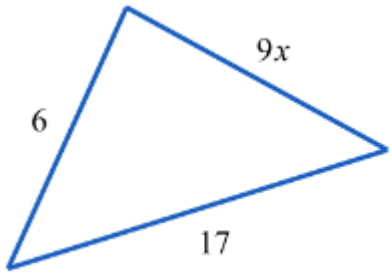
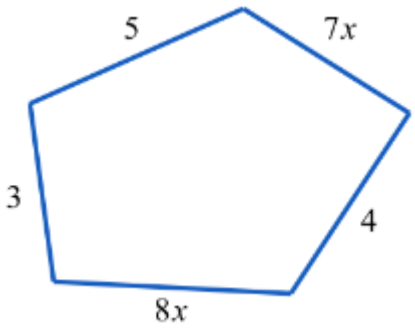
Practice: Translate the following expressions into algebraic expressions.

1) The sum of w and 6.	2) The quotient of x and 8.	3) The difference of 5 and w.
4. b more than 3.	5. 22 increased by twice j.	6. 4 less than three times a number

Skill 3: Combining like terms

Helpful Video Link:
➔Simplifying Algebraic Expressions

Practice: Simplify the expressions.

1)	$5(4y + 1)$	2)	$-3(w + 2) + 6w$
3)	$-(w + 3) + 5(3w + 5)$	4)	$-14x^2 + 6x - 3x^2 + 7$
5)	$10x^2 - 5 + 6x - 4x^2 - 1$	6)	$7x^2 + 3 - 9x - 4x^2 - 11x$
7)	Find the perimeter of the figure, 	8)	Find the perimeter of the figure. 

Skill 5: Absolute Value Expressions

Helpful Video Link:
➔Simplify Absolute Value Expressions

Practice: Simplify the expressions.

1)	$\lvert -9 \rvert$	2)	$\lvert -8 \rvert + \lvert -2 \rvert$
3)	$\lvert -4 \rvert - \lvert 5 \rvert$	4)	$\lvert -8 + 9 \rvert$
5)	$\lvert\lvert -5 \rvert + \lvert 8 - 10 \rvert\rvert$	6)	$\lvert\lvert -3 \rvert - \lvert 4 - 7 \rvert\rvert$

Skill 6: Standardized Assessment Practice

★ The problems below are from different state tests. Please try each one.
★ If you have trouble, write a note or question to remind yourself where you stopped.
★ All problems should have work shown or a note/question.

1)	Which of the expressions has a value of 4? Select **each** correct answer. ❑ A. $\sqrt[3]{64}$ ❑ B. $\sqrt[3]{8}$ ❑ C. $\sqrt{16}$ ❑ D. $\sqrt{64}$ ❑ E. $\sqrt{4}$
2)	The function $h(p)$ represents the cost for a company to manufacture p posters? ❑ A. all integers ❑ B. all real numbers ❑ C. all non-negatives integers ❑ D. all positive rational numbers
3)	The model $n(t) = 2^t$ represents the number of bacteria in a petri dish after t hours, where $t = 0$ represents the time when the bacteria were first put into the dish. What is the correct value and interpretation of $n(8)$? ❑ A. $n(8) = 256$, so after 8 hours there are 256 bacteria. ❑ B. $n(8) = 256$, so after 256 hours there are 8 bacteria. ❑ C. $n(8) = 3$, so after 8 hours there are 3 bacteria. ❑ D. $n(8) = 3$, so after 3 hours there are 8 bacteria.