Name:_____ Date:_____

M8H 2025 Lesson 4 Order of Operations:

1. Evaluate each of the following operations. Remember the order of the operations. Show all your steps:

a) $2+5\times4$	b) $-5-8\div2$	c) $8\times2+6$
d) $-9\times7-20$	e) $8\div2+6$	f) $12-6\times(-3)$
g) $3+11\times4-21$	h) $-6+24\div8-2$	i) $-12-18\div9-6$
j) $(7+2)\times4-5+12\div2$	k) $11\times(3+4)-12\times2$	L) $-20\div(12+8)-15\div5+1$
m) $2(12\div3+4)+12\div4$	n) $(-8\times2+12\div3)\div4\times3$	p) $12\div4\times3\div6\times8\div4$
Q) $(12+2)\times4-(6\times3\div2+12)$	r) $4+(-3-2)\times(14-2)+9\times(6-2)$	s) $3(1-(5\times(5+2)+1)-2)$

2. Use BEDMAS to evaluate each of the following:

a) $4+5^2$	b) 3×2^4	c) $11+3\times 2^3$
d) $3\times 2+3^3$	e) $2^2+3^2+4^2$	f) $4-(1+2)^2$
g) $2(3+4)^2-10$	h) $(4)(1+2)^2$	i) $\left(\sqrt{12+4}\right)-3^2$
j) $\sqrt{3^2+4^2}$	k) $3-2^3\times 4$	L) $3^3-2^2+1^1$
m) $5\times 3^2-4$	n) $(-2)^2+3$	p) -2^2+6
Q) $40\div 2\times 3^2-4$	r) $\dfrac{3^3-2^2+5}{12\div 3}$	s) $\dfrac{(21-17)\div 3}{10^2\div 20}$

t) $2\times(14\div2)^2+5\times12$	u) $4\times(13+8)-8^2\div(2\times4)$	v) $(34+12)\times8\div2+2^5$
w) $36\div(6+3)\times(3^3+17)\div4$	x) $(3^4\div9)+32-(5\times10)+6$	y) $18+(57-38)\times10+4^2$

3. What operations can be placed into the boxes so that the expression will be true:

a) $12 \square 2 \square 3 \square 1 = 17$	b) $9 \square 14 \square 2 \square 3 = -12$	c) $9 \square 4 \square 44 \square 2 = 14$

4. Indicate the all mistakes in each of the following examples shown below. There are at least one mistake in each example:

a) Julie's Work:	b) Tim's work:	c) Tracy's Work:
$15\div3+2-7\times4$ $=15\div5-28$ $=3-28$ $=-25$	$-27+9\times2-6$ $=-27+9\times(-4)$ $=-27+(-36)$ $=63$	$-3-4-5\times2+2\div(-1)$ $=-7-10+-2$ $=-15$

5. Where can you insert a pair of brackets into the following expression so that the value can be maximized?

$$3+6\times9+2-5\times4$$

6. Jason wrote six math exams and got the following scores: 87%, 74%, 65%, 92%, 78%, and 99%. What is the average score for his six exams?

7. Thomas plays on the school basketball team. He gets 3 points if he scores a 3pointer, 2 points for fields-goals, and 1 point for each foul shot made. He scored 4 3pointers, 6 fg, and 9 free throws. How many points did he get?

8. A certain small factory employs 98 workers. Of these 10 receive a wage of $200 per day and the rest receive $100 per day. To the management, a week is equal to 6 working days. How much does the factory pay out for each week?

9. The final grade in a course is the average of the scores on 10 tests. Each test is graded on a scale of zero to 100 inclusive. A student's average on the first 7 tests was 84. The final grade of the student in the course was 63. What was the average student grade on the last 3 tests?

10. Use numbers 1, 2, 3, and 4, each once to replace variables in $a + b \times c^d$. What is the maximum value of the expression?

11. Challenge: How many digits are in the value of $2^{2003} \times 5^{1952} \div 4^{27}$?