

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Math 8 Section 1.6a Order of Operations:**

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

a) $2 + 5 \times 4$	b) $-5 - 8 \div 2$	c) $8 \times 2 + 6$
d) $-9 \times 7 - 20$	e) $8 \div 2 + 6$	f) $12 - 6 \times (-3)$
g) $3 + 11 \times 4 - 21$	h) $-6 + 24 \div 8 - 2$	i) $-12 - 18 \div 9 - 6$
j) $(7 + 2) \times 4 - 5 + 12 \div 2$	k) $11 \times (3 + 4) - 12 \times 2$	l) $-20 \div (12 + 8) - 15 \div 5 + 1$
m) $2(12 \div 3 + 4) + 12 \div 4$	n) $(-8 \times 2 + 12 \div 3) \div 4 \times 3$	p) $12 \div 4 \times 3 \div 6 \times 8 \div 4$
q) $(12 + 2) \times 4 - (6 \times 3 \div 2 + 12)$	r) $4 + (-3 - 2) \times (14 - 2) + 9 \times (6 - 2)$	s) $3(1 - (5 \times (5 + 2) + 1) - 2)$

2. 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) $9 \square 4 \square 44 \square 2 = 14$
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3. Indicate the all mistakes in each of the following examples shown below. There are at least one mistake in each example:

<p>a) Julie's Work:</p> $15 \div 3 + 2 - 7 \times 4$ $= 15 \div 5 - 28$ $= 3 - 28$ $= -25$	<p>b) Tim's work:</p> $-27 + 9 \times 2 - 6$ $= -27 + 9 \times (-4)$ $= -27 + (-36)$ $= 63$	<p>c) Tracy's Work:</p> $-3 - 4 - 5 \times 2 + 2 \div (-1)$ $= -7 - 10 + -2$ $= -15$
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4. Where can you insert a pair of brackets into the following expression so that the value can be maximized?

$$3 + 6 \times 9 + 2 - 5 \times 4$$

- 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?
- 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?
- 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?
- 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?