

# Unit 7 Review Packet

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Terms you should know for this test:

- |                             |                        |                      |
|-----------------------------|------------------------|----------------------|
| a. standard notation        | f. expression          | l. positive/negative |
| b. number-and-word notation | g. number sentence     | m. counters          |
| c. less than                | h. order of operations | n. slide rule        |
| d. greater than             | i. parentheses         | o. "in the hole"     |
| e. equal to                 | j. account balance     | p. "in the red"      |
|                             | k. number model        | q. "in the black"    |

2. Study pages 211-248 in your math journal.

3. Refer to your SRB when necessary. Everything is reviewed in that book. Page numbers are listed on your Study Links, Math Boxes, and Journal pages.

# Unit 7 Review Packet

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Fill in the chart below.

Number	Standard Notation	Number-and-Word Notation
$10^6$		
$10^{11}$		
$7 * 10^5$		
$9.6 * 10^8$		

2. Write  $>$ ,  $<$ , or  $=$ .

a.  $-6$  \_\_\_\_\_  $5$

e.  $-\frac{4}{5}$  \_\_\_\_\_  $-1$

i.  $8 + (-5)$  \_\_\_\_\_  $-13$

b.  $-11$  \_\_\_\_\_  $-8$

f.  $8^2$  \_\_\_\_\_  $7^3$

j.  $-7 + (-9)$  \_\_\_\_\_  $-16$

c.  $49$  \_\_\_\_\_  $-43$

g.  $-7$  \_\_\_\_\_  $4 + (-11)$

k.  $6$  \_\_\_\_\_  $-1 - (-11)$

d.  $10^3$  \_\_\_\_\_  $-300$

h.  $-8 + (-8)$  \_\_\_\_\_  $-12$

l.  $18 / 6$  \_\_\_\_\_  $5 - (-2)$

3. Some of the expressions below are not number sentences. Cross them out. Then circle the number sentences that are true. **(Ignore the number sentences that are false.)**

a.  $12 + (-21) > -33$

d.  $8^2 = 2^8$

g.  $3 * 3 * 3 = 9^3$

b.  $3 * 10^5$

e.  $-12 - (-36) = -48$

h.  $49 = 7^2 - (-36) - 6^2$

c.  $\frac{7}{8} + \frac{7}{8} > 1$

f.  $21$

i.  $16 < 3^3 - 3^2$

4. Explain why the expressions you crossed out in Problem 3 are not number sentences.

---

---

---

---

5. Draw a line from each story to the number model that matches.

a. Sandy baked 3 trays of chocolate-chip cookies with one dozen on each tray. She and her brother ate 9 of them while they were still warm.

$$3 * 12 - 9$$

$$12 - 9 * 3$$

b. Charlie baked 3 trays of chocolate-chip cookies. He Started with one dozen on each tray, but then his mom Came and removed 9 cookies from each tray to send to Charlie's grandmother.

$$12 - (9 * 3)$$

$$3 * (12 - 9)$$

6. Explain your answers to Problem 5.

a. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. Insert parentheses when necessary to make the number sentences true. **(Because of the rules of operations, some of the problems do not need parentheses.)**

a.  $5 + 3 * 4 = 17$

f.  $-10 + 35 / 5 = -3$

b.  $5 + 3 * 4 = 32$

g.  $-2 + 3 * 5 - (-4) = 17$

c.  $15 + 6 / 3 = 17$

h.  $-2 + 3 * 5 - (-4) = 9$

d.  $15 + 6 / 3 = 7$

i.  $5^2 + (-8) - (-7) * 3 = 28$

e.  $-10 + 35 / 5 = 5$

j.  $5^2 + (-8) - (-7) * 3 = 38$

8. Draw a picture (of + and - counters) that shows each account balance.

a. Account Balance =  $-\$8$

b. Account Balance = (Use exactly 13 counters)  $\$9$

9. What is your balance if you have the same number of + and - counters?

10. There are 12 + counters and 6 - counters in a container.

a. What is the balance in the container? \_\_\_\_\_

b. How many - counters do you need to add to get a negative balance? \_\_\_\_\_

c. What will be the new balance if you remove 4 - counters from the original balance?  
\_\_\_\_\_

d. What will be the new balance if you ...

1. remove 2 - counters from the original balance? \_\_\_\_\_

2. add 3 - counters to the original balance? \_\_\_\_\_

11. Solve. You may use your counters or your slide rule to help you.

a.  $3 + (-9) =$  \_\_\_\_\_

b.  $(-7) + (-9) =$  \_\_\_\_\_

c.  $14 + (-8) =$  \_\_\_\_\_

d.  $(-8) + 18 =$  \_\_\_\_\_

e.  $(-17) - 5 =$  \_\_\_\_\_

f.  $(-4) - (-5) =$  \_\_\_\_\_

g.  $7 -$  \_\_\_\_\_  $= 15$

h.  $12 - 17 =$  \_\_\_\_\_

12. Jonathan is playing a game. He is 14 points "in the hole." (He has  $-14$  points.)

a. Jonathan gets 31 points on his next turn. What is his score now? \_\_\_\_\_

b. Now Jonathan loses 22 points this turn. What is his score now? \_\_\_\_\_

c. On his next turn, Jonathan gains 28 points. What is his score now? \_\_\_\_\_

d. On his final turn, Jonathan loses 30 points. What is his final score? \_\_\_\_\_



Name \_\_\_\_\_

## Unit 7 ~~Review~~ Review Packet

Write  $>$   $<$   $=$  for each problem below:

1.  $15$  \_\_\_\_\_  $-6$

2.  $-21$  \_\_\_\_\_  $-12$

3.  $-6 + (-8)$  \_\_\_\_\_  $5 + -3$

Circle the TRUE number sentence in each problem.

4.  $3 = 5 + -8$  or  $9 = -1 + 10$

5.  $2 = -6 + (8)$  or  $-4 = -11 + (-7)$

6. Match each story with the correct story problem.

Story 1

Susie ate 3 cupcakes before going to a party. Susie and 4 friends ate equal shares of 15 cupcakes. How many cupcakes did Susie eat?

$$3 + (15/4) = 6\frac{3}{4}$$

cupcakes

Story 2

There was a box of 15 cupcakes and a plate of 3 cupcakes. Susie and her 4 friends ate equal shares of all of these cupcakes. How many cupcakes did Susie eat?

$$(15 + 3) / 4 = 4\frac{1}{2}$$

cupcakes

If necessary,

Add parentheses to make each number sentence true.

7.  $5 + 7 \times 3 = 36$

8.  $4 + 8 \times 2 = 20$

9.  $7 \times 2 \times 8 + 9 = 238$  (Good Luck!)

Tell if each number sentence is true or false.

Circle the correct answer.

10.  $6^2 = 36$       True    False

11.  $9^2 + 2 = 12$     True    False

12.  $8 + (2 \times 5) = 15$     True    False

13. Why is  $5 \times |$  not a number sentence? \_\_\_\_\_

\_\_\_\_\_

Complete the following chart.

Exponential notation	Base	Exponent	Repeated factors	Product
	6	2	$6 \times 6$	36
$2^5$				
	4			64

Solve the following addition problems:

17.  $-9 + 3 =$  \_\_\_\_\_

18.  $-2 + (-5) =$  \_\_\_\_\_

19.  $29 + (-32) =$  \_\_\_\_\_

Solve the following subtraction problems:

20.  $-6 - 9 =$  \_\_\_\_\_

21.  $5 - (-2) =$  \_\_\_\_\_

22.  $-7 - (-11) =$  \_\_\_\_\_

Write TRUE or FALSE for each number sentence.

23.  $(10 - 3) \times 3 = 21$  \_\_\_\_\_

24.  $4 + 5 \times 6 = 34$  \_\_\_\_\_

25.  $3 \times 7 - 4 = 9$  \_\_\_\_\_

Write the following numbers as powers of 10.

26. 10,000 \_\_\_\_\_

27. 1,000,000 \_\_\_\_\_

28. <sup>one</sup> billion \_\_\_\_\_

Write the following numbers in scientific notation.

29. 30,000 \_\_\_\_\_

30. 400 \_\_\_\_\_

31. 70 \_\_\_\_\_

32. 4,000,000 \_\_\_\_\_

33. 70,000,000 \_\_\_\_\_

34. 9,000,000,000 \_\_\_\_\_

35. 46,000 \_\_\_\_\_

Remember:

Scientific notation looks like this:

$50,000 = 5 \times 10^4$

$460,000 = 4.6 \times 10^5$

36. Draw a picture that shows an account with a balance of \$4 using exactly 10 counters:

(Counters:  
+  
-)