Name _____ Class _____ Date _____

Practice 1-3

Properties of Numbers

Name each property of addition or multiplication used below.

1. $(6 + 3) + 21 = 6 + (3 + 21)$

_____

_____

2. $13 \times 1 = 13$

_____

_____

3. $8 + 20 + 12 = 8 + 12 + 20$

_____

_____

4. $5 \times 2 \times 11 = 2 \times 11 \times 5$

_____

_____

Use mental math to find each sum or product.

5. $53 + 12 + 7$

_____

6. $2 \times 53 \times 5$

_____

7. $8 + 0 + 6$

_____

8. $(19 + 22) + 8$

_____

9. $5 \times (13 \times 20)$

_____

10. $4 + 23 + 6$

_____

11. $25 + (13 + 5)$

_____

12. $7 \times 25 \times (1 \times 8)$

_____

Solve.

13. Mrs. Gauthier plans to take her class on 2 field trips this year. There are 23 students in her class, and each field trip will cost $5 per student. Use mental math to find the total cost for both field trips.

_____

_____

14. Roshonda's garden produced 25 carrots, 127 blackberries, and 5 pumpkins. What was the total number of fruits and vegetables produced by Roshonda's garden? Use mental math to find the solution.

_____

_____

8/18/17 M To 8/22/17

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Reteaching 1-3

Properties of Numbers

The **commutative properties** state that changing the order of addends or factors in a multiplication or addition expression does not change the sum or the product.

Examples: $5 + 1 = 1 + 5$ $4 \times 7 = 7 \times 4$

The **associative properties** state that changing the grouping of addends or factors in a multiplication or addition expression does not change the sum or the product.

Example: $(9 + 3) + 7 = 9 + (3 + 7)$ $2 \times (5 \times 17) = (2 \times 5) \times 17$

The **identity properties** state that adding 0 to a number or multiplying a number by 1 will not change that number.

Example: $32 + 0 = 32$ $15 \times 1 = 15$

You can use these properties to *simplify* mathematical phrases.

Example:

$20 \times (3 \times 5) \times 1$

$20 \times (5 \times 3) \times 1$ ← Commutative Property of Multiplication

$(20 \times 5) \times 3 \times 1$ ← Associative Property of Multiplication

$100 \times 3 \times 1$ ← Simplify.

300×3 ← Identity Property of Multiplication

900 ← Simplify.

Name the property being used.

1. $4 \times 12 \times 25 = 4 \times 25 \times 12$

   _____

2. $(13 \times 2) \times 5 = 13 \times (2 \times 5)$

   _____

3. $6 + 7 + 0 + 49 = 6 + 7 + 49$

   _____

Solve using mental math.

4. $16 + 23 + 4$

   _____

5. $(10 \times 3) \times 25$

   _____

6. $17 + 19 + 3$

   _____

7. $25 + 14 + 25$

   _____

8. $50 \times 17 \times 2$

   _____

9. $11 \times 10 \times 3$

   _____

Name _____ Class _____ Date _____

Enrichment 1-3

Properties of Numbers

Critical Thinking

Write these problems in their most easily computed form. Use the numbers from the bank to fill in the blanks.

1. (___ + ___) + (6 + ___)

3	4	7

2. (___ × ___) × ___

25	7	4

3. ___ + ___ + 50 + ___

25	47	25

4. (___ + ___) + ___

5	17	15

5. (___ × ___) × ___

2	5	37

6. ___ + (___ + ___)

75	25	32

Name _____ Class _____ Date _____

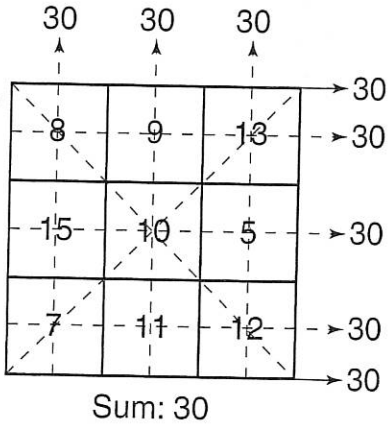
Puzzle 1-3

Properties of Numbers

Mental Math

When you add the numbers in each row, each column, and each diagonal of a number square, the sum is the same.

1. Use your mental math skills to complete these number squares. Write the sum.



Sum: 30

a.

23	21	19
25		

Sum: _____

b.

2	9	
	6	
5		10

Sum: _____

2. Use your math skills to create a number square using the numbers 1–9.

	5	
	3	

Sum: _____

3. In this number square, the product is the same when you multiply the numbers in each row, each column, and each diagonal. Complete the number square.

12	1	18
	6	

Product: _____

Name _____ Class _____ Date _____

Practice 1-4

Order of Operations

Which operation would you perform first in each expression?

1. $4 + 6 \times 9$ _____
2. $(7 - 5) \times 3$ _____
3. $14 \div 2 \times 3$ _____
4. $18 - 5 + 3$ _____
5. $5 \times 2 + 6$ _____
6. $(9 + 14) - 8 \div 2$ _____

Find the value of each expression.

7. $8 - 3 \times 1 + 5$ _____
8. $(43 - 16) \times 5$ _____
9. $14 \times 6 \div 3$ _____
10. $100 \div (63 - 43)$ _____
11. $9 \times (3 \times 5)$ _____
12. $7 \times (8 + 6)$ _____
13. $15 - (5 + 7)$ _____
14. $(12 - 9) \times (6 + 1)$ _____
15. $(9 - 3) \times 2$ _____
16. $8 - 3 \times 2 + 7$ _____
17. $(9 - 4) \times 6$ _____
18. $(35 - 5) \times 3$ _____

Use <, =, or > to complete each statement.

19. $5 - 3 \times 1$ ☐ $(5 - 3) \times 1$
20. $(4 + 8) \times 3$ ☐ $4 + 8 \times 3$
21. $3 \times (8 - 2)$ ☐ $3 \times 8 - 2$
22. $(7 + 2) \times 4$ ☐ $7 + 2 \times 4$
23. $4 + (20 \div 4)$ ☐ $(4 + 20) \div 4$
24. $42 - (35 + 4)$ ☐ $42 - 35 + 4$
25. $(9 - 2) \times 3$ ☐ $9 - 2 \times 3$
26. $55 + 10 - 7$ ☐ $55 + (10 - 7)$

Insert parentheses to make each statement true.

27. $6 + 7 \times 4 - 2 = 26$ _____
28. $14 - 5 \div 3 = 3$ _____
29. $27 \div 4 + 5 - 1 = 2$ _____
30. $6 \times 7 + 2 - 1 = 53$ _____

Write a mathematical expression and solve.

31. Haircuts for boys cost \$7. Haircuts for men cost \$10. If 20 boys and 20 men went to the barber yesterday, how much did the barber earn?

_____

Name _____ Class _____ Date _____

Skills Worksheet

Section Review

Living Things Need Energy

USING KEY TERMS

1. Use each of the following terms in a separate sentence: *herbivores*, *carnivores*, and *omnivores*.

_____

_____

_____

2. In your own words, write a definition for each of the following terms: *food chain*, *food web*, and *energy pyramid*.

_____

_____

_____

UNDERSTANDING KEY IDEAS

_____ **3.** Herbivores, carnivores, and scavengers are all examples of
- **a.** producers.
- **b.** decomposers.
- **c.** consumers.
- **d.** omnivores.

4. Explain the importance of decomposers in an ecosystem.

_____

_____

5. Describe how producers, consumers, and decomposers are linked in a food chain.

_____

_____

6. Describe how energy flows through a food web.

_____

_____

_____

MATH SKILLS

7. The plants in each square meter of an ecosystem obtained 20,810 Calories of energy from sunlight per year. The herbivores in that ecosystem ate all the plants but obtained only 3,370 Calories of energy. How much energy did the plants use? Show your work below.

CRITICAL THINKING

8. Identifying Relationships Draw two food chains, and depict how they link together to form a food web.

9. Applying Concepts Are consumers found at the top or bottom of an energy pyramid? Explain your answer.

10. Predicting Consequences What would happen if a species disappeared from an ecosystem?

Name _____ Class _____ Date _____

Skills Worksheet

Section Review

Types of Interactions

USING KEY TERMS

1. In your own words, write a definition for the term *carrying capacity*.

_____

_____

2. Use each of the following terms in a separate sentence: *mutualism*, *commensalism*, and *parasitism*.

_____

_____

_____

UNDERSTANDING KEY IDEAS

_____ **3.** Which of the following is NOT a prey adaptation?

a. camouflage
b. chemical defenses
c. warning coloration
d. parasitism

4. Identify two things organisms compete with one another for.

_____

_____

5. Briefly describe one example of a predator-prey relationship. Identify the predator and the prey.

_____

_____

_____

_____

Name _____ Class _____ Date _____

Section Review *continued*

CRITICAL THINKING

6. Making Comparisons Compare coevolution with symbiosis.

7. Identifying Relationships Explain the probable relationship between the giant *Rafflesia* flower, which smells like rotting meat, and the carrion flies that buzz around it. (Hint: *Carrion* means "rotting flesh.")

8. Predicting Consequences Predict what might happen if all of the ants were removed from an acacia tree.

Name _____ Class _____ Date _____

Skills Worksheet

Section Review

Everything Is Connected

USING KEY TERMS

1. In your own words, write a definition for the term *ecology*.

_____

_____

2. Use the following terms in the same sentence: *biotic* and *abiotic*.

_____

_____

UNDERSTANDING KEY IDEAS

_____ **3.** Which one of the following is the highest level of environmental organization?

a. ecosystem
b. community
c. population
d. organism

4. What makes up a community?

_____

_____

5. Give two examples of how abiotic factors can affect an ecosystem.

_____

_____

MATH SKILLS

6. From sea level, the biosphere goes up about 9 km and down about 19 km. What is the thickness of the biosphere in meters? Show your work below.

Name _____ Class _____ Date _____

Section Review *continued*

CRITICAL THINKING

7. Analyzing Relationships What would happen to the other organisms in the salt-marsh ecosystem if the cordgrass suddenly died?

8. Identifying Relationships Explain in your own words what people mean when they say that everything is connected.

9. Analyzing Ideas Do ecosystems have borders? Explain your answer.

Adding with Some Regrouping (E)

Find each sum.

2 + 7	8 + 7	8 + 4	6 + 2	4 + 8	4 + 6	6 + 5	3 + 9	2 + 8	7 + 8
8 + 4	7 + 6	9 + 9	5 + 6	2 + 2	6 + 8	2 + 9	6 + 3	5 + 3	8 + 6
2 + 3	8 + 3	3 + 2	9 + 8	4 + 2	4 + 5	9 + 1	4 + 9	9 + 6	2 + 6
4 + 3	2 + 7	5 + 7	7 + 2	9 + 4	8 + 7	5 + 1	3 + 8	9 + 9	3 + 5
6 + 5	2 + 6	7 + 6	6 + 7	2 + 1	7 + 8	6 + 1	5 + 4	1 + 5	3 + 5
5 + 6	6 + 5	2 + 8	8 + 4	1 + 9	3 + 2	3 + 8	4 + 2	2 + 5	7 + 7
5 + 6	6 + 6	3 + 4	4 + 6	6 + 9	6 + 8	8 + 4	3 + 3	6 + 2	7 + 1
3 + 5	1 + 1	6 + 6	9 + 4	6 + 9	3 + 3	9 + 7	6 + 1	3 + 4	3 + 8
3 + 9	2 + 4	9 + 2	9 + 9	4 + 6	9 + 5	2 + 5	5 + 8	9 + 7	3 + 5
4 + 9	6 + 4	5 + 9	9 + 6	7 + 6	3 + 5	8 + 3	7 + 7	4 + 7	8 + 9

Multiplication Facts to 49 (E)

Multiply by 2.

4 × 2	2 × 2	2 × 1	2 × 5	7 × 2	3 × 2	6 × 2
2 × 7	6 × 2	2 × 5	1 × 2	2 × 3	2 × 4	2 × 2
3 × 2	2 × 1	2 × 2	2 × 7	4 × 2	2 × 6	2 × 5
2 × 1	5 × 2	3 × 2	2 × 6	2 × 4	7 × 2	2 × 2
2 × 2	7 × 2	5 × 2	2 × 3	6 × 2	1 × 2	2 × 4
2 × 3	2 × 6	7 × 2	5 × 2	2 × 4	2 × 2	2 × 1
7 × 2	4 × 2	2 × 1	2 × 3	6 × 2	2 × 5	2 × 2

Subtraction Facts to 18 (E)

Calculate each difference.

6	16	10	17	4	7	6	7	9	9
- 0	- 7	- 5	- 8	- 2	- 5	- 1	- 1	- 3	- 1
7	15	14	11	12	5	9	11	12	9
- 6	- 9	- 5	- 8	- 5	- 5	- 4	- 5	- 4	- 8
13	12	2	13	11	10	11	18	15	9
- 4	- 7	- 2	- 9	- 6	- 2	- 3	- 9	- 7	- 0
12	9	7	2	14	5	9	7	7	3
- 9	- 7	- 0	- 1	- 6	- 2	- 9	- 7	- 4	- 3
10	8	12	17	6	13	15	12	8	8
- 3	- 5	- 8	- 9	- 5	- 5	- 6	- 3	- 2	- 6
11	8	5	1	5	4	8	11	3	10
- 9	- 3	- 4	- 1	- 0	- 3	- 1	- 4	- 1	- 9
6	9	8	14	2	10	8	13	3	9
- 4	- 2	- 4	- 7	- 0	- 7	- 0	- 6	- 2	- 5
4	16	14	11	7	15	14	6	8	12
- 0	- 8	- 8	- 2	- 3	- 8	- 9	- 2	- 8	- 6
1	13	0	5	10	6	16	3	10	9
- 0	- 7	- 0	- 3	- 4	- 3	- 9	- 0	- 6	- 6
4	13	10	11	7	10	8	4	5	6
- 4	- 8	- 8	- 7	- 2	- 1	- 7	- 1	- 1	- 6

Division (E)

Find each quotient.

$6\overline{)822}$	$5\overline{)4130}$	$5\overline{)3135}$	$3\overline{)1323}$	$7\overline{)4529}$
$6\overline{)2094}$	$4\overline{)1048}$	$5\overline{)2190}$	$8\overline{)4144}$	$9\overline{)7479}$
$4\overline{)3356}$	$3\overline{)2982}$	$1\overline{)659}$	$8\overline{)5232}$	$2\overline{)1634}$