

Skills Worksheet

Chapter Review

USING KEY TERMS

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

Complete each of the following sentences by choosing the correct term from the word bank.

biotic

abiotic

ecosystem

community

2. The environment includes _____ factors including water, rocks, and light.

3. The environment also includes _____, or living, factors.

4. A community of organisms and their environment is called a(n) _____.

For each pair of terms, explain how the meanings of the terms differ.

5. *community* and *population*

6. *ecosystem* and *biosphere*

Chapter Review *continued*

7. producers and consumers

UNDERSTANDING KEY IDEAS

Multiple Choice

_____ 8. A tick sucks blood from a dog. In this relationship, the tick is the _____ and the dog is the _____.

| | |
|-------------------|-------------------|
| a. parasite, prey | c. parasite, host |
| b. predator, host | d. host, parasite |

_____ 9. Resources such as water, food, or sunlight are likely to be limiting factors

| |
|--|
| a. when population size is decreasing. |
| b. when predators eat their prey. |
| c. when the population is small. |
| d. when a population is approaching the carrying capacity. |

_____ 10. Nature's recyclers are

| | |
|-----------------|---------------|
| a. predators. | c. producers. |
| b. decomposers. | d. omnivores. |

_____ 11. A beneficial association between coral and algae is an example of

| | |
|------------------|---------------|
| a. commensalism. | c. mutualism. |
| b. parasitism. | d. predation. |

_____ 12. The process by which energy moves through an ecosystem can be represented by

| |
|---------------------|
| a. food chains. |
| b. energy pyramids. |
| c. food webs. |
| d. All of the above |

_____ 13. Which organisms does the base of an energy pyramid represent?

| | |
|---------------|---------------|
| a. producers | c. herbivores |
| b. carnivores | d. scavengers |

_____ 14. Which of the following is the correct order in a food chain?

| |
|---|
| a. sun→producers→herbivores→scavengers→carnivores |
| b. sun→consumers→predators→parasites→hosts |
| c. sun→producers→decomposers→consumers→omnivores |
| d. sun→producers→herbivores→carnivores→scavengers |

Chapter Review *continued*

15. Remoras and sharks have a relationship that is best described as
- a. mutualism.
 - b. commensalism.
 - c. predator and prey.
 - d. parasitism.

Short Answer

16. Describe how energy flows through a food web.

17. Explain how the food web changed when the gray wolf disappeared from Yellowstone National Park.

18. How are the competition between two trees of the same species and the competition between two different species of trees similar?

19. How do limiting factors affect the carrying capacity of an environment?

20. What is coevolution?

Chapter Review *continued*

CRITICAL THINKING

21. Concept Mapping Use the following terms to create a concept map:
herbivores, organisms, producers, populations, ecosystems, consumers, communities, carnivores, and biosphere.

22. Identifying Relationships Could a balanced ecosystem contain producers and consumers but not decomposers? Why or why not?

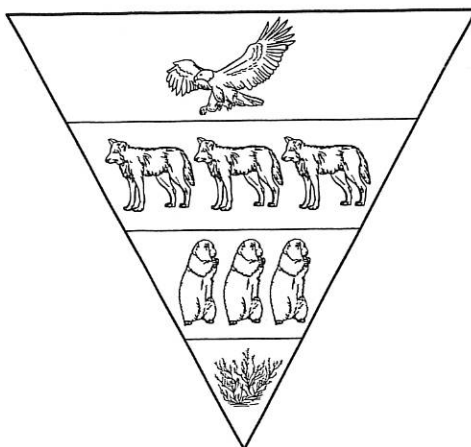
23. Predicting Consequences Some biologists think that certain species, such as alligators and wolves, help maintain biological diversity in their ecosystems. Predict what might happen to other organisms, such as gar fish or herons, if alligators were to become extinct in the Florida Everglades.

24. Expressing Opinions Do you think there is a carrying capacity for humans? Why or why not?

Chapter Review *continued*

INTERPRETING GRAPHICS

Use the energy pyramid below to answer the questions that follow.



25. According to the energy pyramid, are there more prairie dogs or plants?

26. What level has the most energy?

27. Would an energy pyramid such as this one exist in nature?

28. How could you change this pyramid to look like one representing a real ecosystem?

Reteaching 1-4

Order of Operations

To find the value of an expression follow the *order of operations*.

First, do all operations inside parentheses.

Next, multiply and divide from left to right.

Then, add and subtract from left to right.

Example 1 Find the value of $6 + (3 + 4) \times 2$.

① Work inside parentheses. $\rightarrow (3 + 4) = 7$

$$6 + 7 \times 2$$

② Multiply next. $\rightarrow 7 \times 2 = 14$

$$6 + 14$$

③ Then, add.

$$6 + 14 = 20$$

Example 2 Compare $10 - (6 \div 2) + 1$ and $(10 - 6) \div 2 + 1$.

First, find the value of each expression.

| | |
|-----------------------|-----------------------|
| $10 - (6 \div 2) + 1$ | $(10 - 6) \div 2 + 1$ |
| $10 - 3 + 1$ | $4 \div 2 + 1$ |
| $7 + 1$ | $2 + 1$ |
| 8 | 3 |

Then, use $<$, $=$, or $>$ to compare.

$$8 > 3$$

So,

$$10 - (6 \div 2) + 1 > (10 - 6) \div 2 + 1.$$

Find the value of each expression.

1. $3 + (4 + 1) \times 2$

a. $4 + 1 =$ _____

b. _____ $\times 2 =$ _____

c. $3 +$ _____ $=$ _____

3. $2 + 6 \times 3 \div 3 =$ _____

2. $24 \div (5 + 3) - 2$

a. $5 + 3 =$ _____

b. $24 \div$ _____ $=$ _____

c. _____ $- 2 =$ _____

4. $(6 + 2) \times 3 \div 4 =$ _____

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

5. $9 + 3 \times 4$ $9 + (3 \times 4)$

6. $(12 - 4) \times 3$ $12 - (4 \times 3)$

7. $6 \div 3 + 4 \times 2$ $(6 \div 3) + 4 \times 2$

8. $3 \times (12 - 5) + 2$ $3 \times 12 - (5 + 2)$

9. $15 - (12 \div 3)$ $(15 - 12) \div 3$

10. $8 + 2 \times (9 - 7)$ $8 + (2 \times 9) - 7$

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Enrichment 1-4

Critical Thinking

Use the numbers and the operators given in each box to complete the equation. You may use each number and each operator only once per equation. Fill in the blanks with numbers. Fill in boxes with operators.

1. 4 2 16 - ÷

() = 4

2. + - 200 ÷

50 10 15 = 210

3. 0 + 6 × 16

2 = 3 + + 7

4. 2 × 4 0 6

(+ + 9) + 4 =

5. 8 ÷ 2 3 140

(6) × (+) = ÷ 7

6. Make your own puzzle. Leave out three numbers and two operational symbols. Trade with a classmate!

1E: Vocabulary Check

For use after Lesson 1-4

Study Skill Strengthen your vocabulary. Use these pages and add cues and summaries by applying the Cornell Notetaking style.

Write the definition for each word or term at the right. To check your work, fold the paper back along the dotted line to see the correct answers.

Associative Property of Addition

Commutative Property of Addition

expression

Commutative Property of Multiplication

Identity Property of Multiplication

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W 8/25/11

1E: Vocabulary Check (continued)

For use after Lesson 1-4

Write the vocabulary word or term for each definition. To check your work, fold the paper forward along the dotted line to see the correct answers.

Changing the grouping of the addends does not change the sum.

Changing the order of the addends does not change the sum.

a mathematical phrase containing numbers and operation symbols.

Changing the order of the factors does not change the product.

The product of 1 and a is a .

Th 5/28/17

Puzzle 1-4

Order of Operations

Math Express

Use each of the given numbers and operations once to write an expression. You may add parentheses.

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 6 | 2 | 5 | + | × | × |
|---|---|---|---|---|---|---|

Write an expression equal to 27.

$$(3 \times 5) + (6 \times 2)$$

1.

| | | | | |
|----|---|----|---|---|
| 12 | 6 | 15 | - | ÷ |
|----|---|----|---|---|

Write an expression equal to 13.

2.

| | | | | |
|----|----|---|---|---|
| 32 | 16 | 9 | ÷ | + |
|----|----|---|---|---|

Write an expression equal to 11.

3.

| | | | | |
|---|---|---|---|---|
| 6 | 8 | 4 | × | ÷ |
|---|---|---|---|---|

Write an expression equal to 12.

4.

| | | | | |
|---|---|---|---|---|
| 7 | 6 | 3 | × | + |
|---|---|---|---|---|

Write an expression equal to 63.

5.

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 7 | 9 | 4 | + | + | - |
|---|---|---|---|---|---|---|

Write an expression equal to 5.

6.

| | | | | | | |
|---|---|---|----|---|---|---|
| 4 | 5 | 9 | 16 | + | - | ÷ |
|---|---|---|----|---|---|---|

Write an expression equal to 0.

7.

| | | | | | | |
|---|---|----|----|---|---|---|
| 2 | 3 | 10 | 15 | ÷ | ÷ | - |
|---|---|----|----|---|---|---|

Write an expression equal to 0.

8.

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 | 8 | 9 | 7 | + | ÷ | + |
|---|---|---|---|---|---|---|

Write an expression equal to 10.

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F 2/28/17

Subtracting 2-Digit Numbers (F)

Name: _____

Date: _____

Calculate each difference.

$$\begin{array}{r} 49 \\ - 38 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \\ - 79 \\ \hline \end{array}$$

$$\begin{array}{r} 94 \\ - 31 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ - 40 \\ \hline \end{array}$$

$$\begin{array}{r} 44 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 92 \\ - 68 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \\ - 31 \\ \hline \end{array}$$

$$\begin{array}{r} 51 \\ - 22 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ - 44 \\ \hline \end{array}$$

$$\begin{array}{r} 15 \\ - 14 \\ \hline \end{array}$$

$$\begin{array}{r} 86 \\ - 54 \\ \hline \end{array}$$

$$\begin{array}{r} 92 \\ - 17 \\ \hline \end{array}$$

$$\begin{array}{r} 52 \\ - 35 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ - 54 \\ \hline \end{array}$$

$$\begin{array}{r} 78 \\ - 30 \\ \hline \end{array}$$

$$\begin{array}{r} 86 \\ - 23 \\ \hline \end{array}$$

$$\begin{array}{r} 74 \\ - 25 \\ \hline \end{array}$$

$$\begin{array}{r} 75 \\ - 31 \\ \hline \end{array}$$

$$\begin{array}{r} 93 \\ - 76 \\ \hline \end{array}$$

$$\begin{array}{r} 53 \\ - 12 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ - 10 \\ \hline \end{array}$$

$$\begin{array}{r} 82 \\ - 10 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ - 10 \\ \hline \end{array}$$

$$\begin{array}{r} 88 \\ - 13 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \\ - 31 \\ \hline \end{array}$$

Division Facts (F)

Find each quotient.

$20 \div 5 =$

$12 \div 3 =$

$4 \div 1 =$

$3 \div 3 =$

$15 \div 3 =$

$10 \div 2 =$

$15 \div 5 =$

$12 \div 4 =$

$5 \div 1 =$

$10 \div 5 =$

$4 \div 4 =$

$25 \div 5 =$

$16 \div 4 =$

$9 \div 3 =$

$8 \div 4 =$

$3 \div 1 =$

$20 \div 4 =$

$6 \div 3 =$

$2 \div 1 =$

$1 \div 1 =$

$2 \div 2 =$

$8 \div 2 =$

$4 \div 2 =$

$6 \div 2 =$

$5 \div 5 =$

$5 \div 1 =$

$6 \div 3 =$

$4 \div 1 =$

$10 \div 5 =$

$5 \div 5 =$

$25 \div 5 =$

$12 \div 4 =$

$3 \div 1 =$

$2 \div 1 =$

$8 \div 4 =$

$1 \div 1 =$

$12 \div 3 =$

$2 \div 2 =$

$9 \div 3 =$

$3 \div 3 =$

$20 \div 4 =$

$15 \div 3 =$

$8 \div 2 =$

$4 \div 4 =$

$10 \div 2 =$

$16 \div 4 =$

$15 \div 5 =$

$20 \div 5 =$

$6 \div 2 =$

$4 \div 2 =$

$12 \div 3 =$

$8 \div 4 =$

$2 \div 2 =$

$4 \div 4 =$

$16 \div 4 =$

$20 \div 4 =$

$6 \div 3 =$

$3 \div 3 =$

$1 \div 1 =$

$2 \div 1 =$

$10 \div 5 =$

$15 \div 3 =$

$8 \div 2 =$

$4 \div 1 =$

$15 \div 5 =$

$20 \div 5 =$

$3 \div 1 =$

$6 \div 2 =$

$12 \div 4 =$

$5 \div 1 =$

$9 \div 3 =$

$5 \div 5 =$

$10 \div 2 =$

$4 \div 2 =$

$25 \div 5 =$

$4 \div 4 =$

$25 \div 5 =$

$16 \div 4 =$

$2 \div 2 =$

$15 \div 3 =$

$3 \div 3 =$

$4 \div 1 =$

$1 \div 1 =$

$12 \div 3 =$

$4 \div 2 =$

$6 \div 2 =$

$12 \div 4 =$

$6 \div 3 =$

$2 \div 1 =$

$20 \div 4 =$

$10 \div 2 =$

$5 \div 1 =$

$3 \div 1 =$

$9 \div 3 =$

$10 \div 5 =$

$8 \div 2 =$

$8 \div 4 =$

$15 \div 5 =$

$20 \div 5 =$

$5 \div 5 =$