7th Grade
Week 5
ELA and Math
Answer Keys
1. According to the passage, which gas is generated in especially large amounts when we burn fossil fuels?
   - A. carbon dioxide
   - B. methane
   - C. carbon monoxide
   - D. sulfur dioxide

2. The increase of carbon dioxide in the atmosphere has had which effect on the Earth's climate?
   - A. Average rainfall has decreased.
   - B. Extreme weather has become less common.
   - C. The Earth's temperatures are rising.
   - D. The Earth's temperatures are falling.

3. Arctic ice plays an important role in cooling the Earth. Which evidence from the passage best supports this statement?
   - A. In the last 30 years, more than one-third of the ice that appears in the Arctic during the summer has melted away.
   - B. Arctic ice reflects the Sun's light.
   - C. When Arctic ice melts, it reveals more of the darker-colored land or ocean water.
   - D. Darker-colored land absorbs the Sun's light, causing the climate's temperature to increase.

4. Some of the gases that contribute to global warming are trapped in permafrost. When permafrost melts, many of these gases are released into the atmosphere. This leads to an increase of the atmosphere's temperature, which causes more permafrost to melt.

What type of feedback loop is this an example of?
   - A. negative feedback loop
   - B. complex feedback loop
   - C. both a positive and negative feedback loop
   - D. positive feedback loop
5. What is the main idea of this passage?

A. Climate change is a complex and unpredictable process involving feedback loops.
B. Disagreements about climate change have prevented scientists from finding real solutions to global warming.
C. Wallace Broecker's theory may have been incorrect, but he presented some worthwhile ideas.
D. Climate change can be completely reversed if carbon dioxide production is changed.

6. Read the following sentences: "Some scientists expect an increase in so-called 'extreme weather' events, such as hurricane and floods. Others foresee a rise in levels of sea water."

Which word could best replace "foresee" as used in this sentence?

A. forecast
B. glimpse
C. pretend
D. discover

7. Choose the answer that best completes the sentence below.

Trees play important roles in preventing global warming, __________ absorbing carbon dioxide and pumping water into the atmosphere.

A. thus
B. finally
C. as a result
D. including

8. How does carbon dioxide increase the Earth's temperature?

Carbon dioxide traps heat which can cause the Earth's temperature to rise if large quantities of carbon dioxide are released in the Earth's atmosphere.
9. What is a feedback loop?

A feedback loop is a process that helps to amplify or diminish certain changes within the process.

10. How can heat produce more heat? Use information from the passage to support your answer.

Answers may vary and should be supported by the passage. Students should indicate that heat produces more heat in positive feedback loop systems. Students may also illustrate this phenomenon using one of the examples from the passage. For example, they may mention the example of melting permafrost. Some of the gases that contribute to global warming are trapped in permafrost. When permafrost melts, many of these gases are released into the atmosphere. This leads to an increase of the atmosphere's temperature, which causes more permafrost to melt. As more permafrost melts, the atmosphere's temperature increases. Thus, heat can produce more heat.
Multiplying Negative Rational Numbers

Find the product of the rational numbers. The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1. $2 \times -\frac{7}{4}$
   \[ \frac{-3}{2} \]
2. $-\frac{1}{3} \times -\frac{6}{5}$
   \[ \frac{2}{5} \]
3. $\frac{2}{5} \times -\frac{3}{4}$
   \[ -\frac{3}{10} \]
4. $-2\frac{1}{3} \times \frac{5}{4}$
   \[ -2\frac{11}{12} \]
5. $-\frac{3}{7} \times -1\frac{2}{3}$
   \[ \frac{5}{7} \]
6. $-3\frac{5}{7} \times -2\frac{1}{2}$
   \[ 9\frac{2}{7} \]
7. $0.75 \times -\frac{4}{3}$
   \[ -1 \]
8. $-0.2 \times -\frac{2}{5}$
   \[ \frac{2}{25} \text{ or } 0.08 \]
9. $-0.35 \times -1\frac{3}{7}$
   \[ \frac{1}{2} \text{ or } 0.5 \]
10. $2.5 \times -3\frac{4}{5}$
    \[ -9\frac{1}{2} \text{ or } -9.5 \]
11. $0.2 \times -0.45$
    \[ -0.09 \]
12. $-0.25 \times -1.4$
    \[ 0.35 \]
13. $-2.3 \times 6.8$
    \[ -15.64 \]
14. $-3.9 \times 5\frac{5}{9}$
    \[ -21\frac{2}{3} \text{ or } 21.6 \]
15. $-4.2 \times -6\frac{2}{7}$
    \[ 26\frac{2}{5} \text{ or } 26.4 \]

Answers

$-21\frac{2}{3}$ $-15.64$ $-9\frac{1}{2}$ $-3\frac{1}{2}$ $-2\frac{11}{12}$ $-1$ $-\frac{3}{10}$ $-0.09$ $\frac{2}{25}$ $0.35$ \[ \frac{2}{5} \] $\frac{1}{2}$ $\frac{5}{7}$ $9\frac{2}{7}$ \[ 26\frac{2}{5} \]
Dividing Negative Rational Numbers

Find each quotient.

1. \(-5 \div \frac{5}{7}\)
2. \(-\frac{8}{9} \div \frac{2}{3}\)
3. \(-\frac{3}{10} \div \frac{6}{7}\)
4. \(-2\frac{3}{4} \div 11\)
5. \(-4\frac{2}{7} \div \frac{15}{16}\)
6. \(-1\frac{4}{7} \div -3\frac{2}{3}\)
7. \(-8 \div 6.4\)
8. \(-\frac{3}{2} \div 0.5\)
9. \(-3\frac{1}{3} \div 1.2\)
10. \(9.28 \div -3.2\)
11. \(0.056 \div -0.004\)
12. \(-0.28 \div 0.07\)
13. Explain the steps you used to solve problem 11.
   Possible explanation: I changed the expression to \(56 \div -4\) by multiplying the dividend and the divisor by 1,000.
Writing Rational Numbers as Repeating Decimals

Write each number as a repeating decimal.

1. \( \frac{1}{9} \)

\[ 0.\overline{1} \]

2. \( -\frac{2}{11} \)

\[ -0.\overline{1}8 \]

3. \( \frac{7}{11} \)

\[ 0.\overline{6}3 \]

4. \( \frac{1}{3} \)

\[ 0.\overline{3} \]

5. \( 2\frac{4}{9} \)

\[ 2.\overline{4} \]

6. \( -\frac{13}{6} \)

\[ -2.\overline{1}6 \]

7. \( -1\frac{5}{6} \)

\[ -1.\overline{8}3 \]

8. \( \frac{13}{99} \)

\[ 0.\overline{1}3 \]

9. When the denominator of a proper fraction is 99, what do you notice about the repeating digit(s) in its decimal form?

Possible answer: The numerator tells the repeating digits.

For example, \( \frac{28}{99} = 0.\overline{2}8 \).
7th Grade Science Answer Key
Across

2 A large piece of ice that breaks off an ice shelf and drifts into the ocean. (7) **Iceberg**

4 Thick deposits of windblown, fine grained sediments. (5) **Loess**

6 The boundary between land and a body of water. (9) **Shoreline**

9 The grinding and wearing down of rock surfaces by other rock or sand particles. (8) **Abrasion**

11 The lifting and removal of fine sediment by wind. (9) **Deflation**

12 A sharp pyramid-shaped peak that forms when three or more cirques erode a mountain. (4) **Horn**

Down

1 A large crack that forms where a glacier picks up speed or flows over a high point. (8) **Crevasse**

3 A bowl-like depression where glacial ice cuts back into mountain walls. (6) **Cirque**

5 The movement of sand sized particles by skipping and bouncing action in the direction the wind is blowing. (9) **Saltation**

7 An enormous mass of moving ice. (7) **Glacier**

8 A mound of wind deposited sand. (4) **Dune**

10 Any area of the shoreline made up of material deposited by waves. (5) **Beach**
Electric Circuits Cloze

An electric _____circuit_______ is a flow of electricity though a material. Materials that allow electricity to flow through them are called ____conductors________. An electric __current______ is a path though which electric currents flow. In order to start the current flowing, a circuit needs a _____voltage________ source such as a ___battery________.

Many circuits have a __switch_______, which is a device to open and close the circuit. When the circuit is ______open_______, the electric current does not flow When the circuit is _____closed_______, current does flow.

Circuits also have ____resistors________, which are objects that resist the flow of electricity. Resistors can be used to transform electrical energy into other forms of energy such as ____heat_______ or light. A light bulb is a resistor that transforms electrical energy into light energy.

Without resistors, electricity can travel too quickly through a circuit damaging the parts of the circuit. When this happens it’s called a _____short_______ circuit. A ___fuse______ is a safety device that prevents short circuits by breaking the circuit when too much current is traveling through it.