

6th Grade

Week 5

ELA and Math

Answer Keys

1. Where does this story take place?

- A. Montana
- B. New York City
- C. on an airplane**
- D. in a helicopter

2. What main problem does Maria face?

- A. She does not want to go on vacation.
- B. She is afraid of flying.**
- C. She does not like her brother.
- D. She has never seen a rainbow.

3. Maria is trying to get over her fear of flying. Which details from the text support this statement?

- A. Maria keeps her window shade open instead of closing it like she usually does.**
- B. Maria stays in her seat with her seatbelt fastened.
- C. Maria wears earplugs to block out the noise.
- D. Maria spots a rainbow.

4. How does Maria feel about discovering the rare circular rainbow?

- A. bored and uninterested
- B. jealous and annoyed
- C. scared and doubtful
- D. happy and excited**

5. What is this passage mostly about?

- A. Maria's family vacation to Montana
- B. the beautiful mountains and hot springs of Montana
- C. how a rainbow helps Maria overcome her fear of flying**
- D. the scientific study of light waves

6. Read the following sentences: "It had been raining all night but seemed as though the sun would shine today. The sky now appeared as a **beguiling** mix of dark rainclouds and bright yellow light and little pockets of sky blue. Maria gazed in wonder at this close-up view of the skies."

What does "**beguiling**" mean?

- A. **fascinating or attractive**
- B. ugly or uninteresting
- C. bright or colorful
- D. strange or mysterious

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

Rainbows are usually shaped like a semicircle, _____ the rainbow Maria saw in the sky was a full circle.

- A. thus
- B. also
- C. finally
- D. **but**

8. How are rainbows formed?

Rainbows are formed when a ray of sunlight hits a water droplet suspended in the air and bends its path, bouncing off the water droplet in a different direction. As it bounces off, the sunray splits into the different wavelengths of light that it is composed of, and we then see a rainbow of colors.

9. Why does Laura the physicist say that Maria "made this a flight to remember"?

Laura says that Maria "made this a flight to remember" because she spotted the rare full circle rainbow, and they may never have the chance to see another one for the rest of their lives.

10. How did Maria's attitude towards flying and airplanes change throughout the course of the story? What caused this change?

At the beginning of the story, Maria did not like airplanes at all. She was terrified of flying and wanted to stay on solid ground. By the end of the story, she appreciated that airplanes are "marvelous invention[s]" that allowed her to see something rare and beautiful that she could not have seen from the ground. Her change in attitude is caused by seeing a rare circular rainbow in the sky.

Using Unit Rates to Compare Ratios

Solve each problem. Show your work.

- 1 Shawn sells 36 vehicles in 4 weeks. Brett sells 56 vehicles in 7 weeks. Who sells more vehicles per week?

Shawn; Possible work: Shawn: $\frac{36}{4} = 9$ vehicles per week;

Brett: $\frac{56}{7} = 8$ vehicles per week; $9 > 8$

- 2 The table shows the gas mileage of two vehicles. Which vehicle travels more miles per gallon?

Car	Miles	Gallons
Pickup Truck	120	8
Minivan	180	10

Minivan; Possible work: Pickup Truck: $\frac{120}{8} = 15$; Minivan: $\frac{180}{10} = 18$;

$18 \text{ mpg} > 15 \text{ mpg}$

- 3 Joe and Chris each have a lawn mowing business. Joe charges \$40 to mow 2 acres. Chris charges \$30 to mow 1.2 acres. Who charges more per acre?

Chris; Possible work: Joe: $\frac{40}{2} = 20$; Chris: $\frac{30}{1.2} = 25$; $\$25 > \20

- 4 The table shows the time it took two athletes to run different races. Who ran faster?

Athlete	Seconds	Meters
Ellen	28	200
Lindsay	60	400

Ellen; Possible work: Ellen: $\frac{200}{28} \approx 7.14$ meters per second;

Lindsay: $\frac{400}{60} \approx 6.67$ meters per second; $6.67 < 7.14$

Using Unit Rates to Compare Ratios *continued*

- 5 Branden and Pete each play running back. Branden carries the ball 75 times for 550 yards, and Pete has 42 carries for 380 yards. Who runs farther per carry?

Pete; Possible work: Branden: $\frac{550}{75} \approx 7.33$ yards per carry;

Pete: $\frac{380}{42} \approx 9.05$ yards per carry; $9.05 > 7.33$

- 6 The table shows the price of two cereal brands and the number of ounces per box. Which is the better price per ounce?

Cereal	Ounces	Price
Brand A	18	\$2.50
Brand B	24	\$3.50

Brand A; Possible work: Brand A: $\frac{2.50}{18} \approx 0.14$; Brand B: $\frac{3.50}{24} \approx 0.15$;

$\$0.14 < \0.15

- 7 Describe two different ways you could change the values in the table so that the answer to problem 6 is different.

Possible answer: I could change the price of Brand B to \$3.35 or less or change the number of ounces for Brand B to 25 ounces or more.

Using Unit Rates to Convert Measurements

► Solve each problem. Show your work.

- 1 Susan has a 12-inch board for constructing a wooden chair. The directions say to use a board that is 29 centimeters long. Is her board long enough to cut?
(1 inch = 2.54 centimeters)

Yes; Possible work: 2.54 centimeters per inch: $12 \times 2.54 = 30.48$

Her board is 30.48 centimeters long, so she has enough to cut 29 centimeters.

- 2 Kevin uses 84 fluid ounces of water to make an all-purpose cleaner. The directions call for 4 fluid ounces of concentrated soap for every 3 cups of water. How many fluid ounces of soap should he use? (1 cup = 8 fl oz)

14 fluid ounces of soap; Possible work: 8 fl oz per cup: $8 \times 3 = 24$ fl oz of water

4 fl oz of soap per 24 fl oz of water: $\frac{4}{24} = \frac{1}{6}$ fl oz of soap per fl oz of water

$$84 \times \frac{1}{6} = 14$$

- 3 Shannon test-drives a car in Germany and drives 95 kilometers per hour. What is her speed in miles per hour? (1 kilometer \approx 0.62 mile)

58.9 miles per hour; Possible work: 0.62 mile per kilometer: $95 \times 0.62 = 58.9$

- 4 Keith works 8 hours per day for 5 days per week. Melba works 2,250 minutes each week. Who spends more time at work?

Keith; Possible work: 60 minutes in 1 hour; $8 \times 5 = 40$ hours per week; $40 \times 60 = 2,400$ minutes, so Keith works 2,400 minutes each week. This is more than 2,250, so Keith spends more time at work.

Using Unit Rates to Convert Measurements *continued*

- 5 Jason runs 440 yards in 75 seconds. At this rate, how many minutes does it take him to run a mile? (1 mile = 1,760 yards)

5 minutes; Possible work: $\frac{1}{1,760}$ miles per yard, $440 \times \frac{1}{1,760} = \frac{1}{4}$ mile

He runs $\frac{1}{4}$ mile in 75 seconds, so it takes him $75 \times 4 = 300$ seconds to run a mile.

$\frac{1}{60}$ min per second, $300 \times \frac{1}{60} = 5$ minutes

- 6 Boxes of granola are on sale at a price of 2 for \$4.50. There are 12 ounces of granola in each box. What is the unit price in dollars per pound?

\$3.00 per pound; Possible work: $12 \times 2 = 24$ total ounces; 16 ounces in

1 pound; $\frac{24}{16} = 1.5$ pounds; $\frac{4.50}{1.5} = \$3.00$ per pound

- 7 Sam is delivering two refrigerators that each weigh 105 kilograms. There is an elevator with a weight limit of 1,000 pounds. Can he take both refrigerators on the elevator in one trip? (1 kilogram \approx 2.2 pounds)

Yes; Possible work: 2.2 pounds per kilogram; $105 \times 2.2 = 231$;

$231 \times 2 = 462$

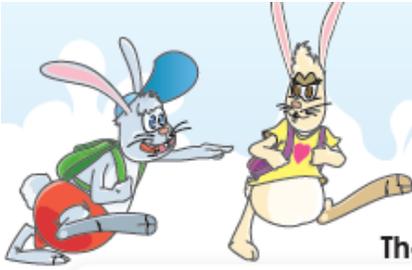
Sam can take the refrigerators in the elevator in one trip because the combined weight of the refrigerators is only 462 pounds.

- 8 For every 140 feet that Kelly rides on her bicycle, the wheels turn 20 times. About how many times do the wheels turn in 5 miles? (1 mile = 5,280 feet)

about 3,771 times; Possible work: 5,280 feet per mile, $\frac{20}{140} = \frac{1}{7}$ turn per foot,

$5 \times 5,280 = 26,400$ feet; $26,400 \times \frac{1}{7} = 3,771.43$ turns

6th Grade
Science Answer
Key



Name: _____ Class: _____

The Earth And The Solar System

Answer True or False in the following questions.

1. The moon revolves around the earth. True
2. The earth is the center of the universe. False
3. The earth's revolution occurs every 24 hours. False
4. The axis of the earth is tilted. True
5. Our solar system is part of the Milky Way galaxy. True
6. Venus is the largest planet in our solar system. False
7. The earth is the center of the universe. False
8. The universe is mainly constituted of empty space. True
9. The sun's gravity is what keeps the earth in its orbit. True
10. The closest planet to the sun in our solar system is mars. False

11. List the planets labeled 1 to 8 above. _____



Name: _____ Class: _____

Earth Core & Rocks

1. What part of the earth is made up of liquid metals ? outer core
2. The inner core is made up of solid iron and nickel.
3. Plates that grind past one another are called transform or divergent plates
4. At convergent boundaries, plates collide with one another.
5. Melted rock found beneath the Earth's surface is referred to as Magma
6. The Mantle is the layer of the Earth directly underneath the crust.
7. Magma that reaches the Earth's surface is referred to as Lava
8. Plates that move away from each other are referred to as Divergent plates
9. Weathering is the process of breaking rocks into smaller pieces through physical or chemical means.
10. The Richter scale is used to measure the energy released by an earthquake.
11. The process by which small rocks and materials are moved from one place to another is referred to as Erosion.

1. What is an earthquake ?
 - a. a series of volcanoes
 - b. a mountain range
 - c. a sudden movement of the Earth's crust
 - d. a sudden rock fall

2. Which of the following can occur because of a volcanic eruption ?
 - a. earthquake
 - b. landslide
 - c. formation of new mountains
 - d. all of the above

3. California is crossed over several miles by the San Andreas Fault. How does this affect California ?
 - a. leads to intense sunshine during the summer
 - b. leads to several earthquakes each year
 - c. affects the migration of birds
 - d. causes a lot of strong winds

4. Which of the following can occur because of a volcanic eruption ?
 - a. earthquake
 - b. landslide
 - c. formation of new mountains
 - d. all of the above

5. Which of the following is most likely to experience a landslide ?
 - a. hillside
 - b. top of a plateau
 - c. plain
 - d. top of a mountain

6. How are people affected by earthquakes ?

7. What should people do in the event of an earthquake ?
