## That's Debatable!

By Beth Beutler

Some people make a team sport out of it. Politicians formally conduct them. There are many sides to an issue, and a debate is the type of speech used to "talk it out."

There are debate teams who enjoy preparing their speeches and conducting them in competition. A political debate is similar, with both candidates being given an opportunity to share their views on a variety of subjects. There are usually guidelines to keep the debate orderly, although when two people argue, it can get emotional!

If you are going to be involved in a debate, here are some tips that you
 should consider. These can apply whether you are assigned a topic and viewpoint, or if you create one of your own.

1. Know your subject. Be sure to take time to get to know your topic. When you are debating, you will be expected to come across as informed and knowledgeable. You cannot do that without being familiar with your topic. Read items from books and credible sources on the Internet. If possible, you may want to interview an expert on the subject. For example, if you are debating about treatment options for animals with illness, you may want to talk with a veterinarian.
2. Become very comfortable with the structure of the debate. It is important to know ahead of time how the debate will work. Will each side be given a specific amount of time? You will need to practice your statements so that they will fit into the allotted time.
3. Understand both sides of the argument. In order to effectively debate, you not only have to know your own subject well, but you should anticipate what your opponent might say. In the above example, you may be taking the side that medicines and operations are necessary to help sick animals. Your opponent may advocate a natural approach to health care for animals. Study the other side of the question as well as your own. This will help you argue intelligently.
4. Be prepared for disagreement. The opponent is supposed to disagree with your position. Do not take it personally (especially in an assigned-topic debate). It is important that you put personal feelings aside as you debate.
5. Prepare yourself to act professionally. Treat your opponent(s) with respect. You might even acknowledge interesting points of view. You could say, "That is a valid point, but research shows..." etc. (Be sure to have the research to back up your opinion!)
6. Keep your arguments brief and powerful. It is better to make only a few points, but make them powerfully, than to overwhelm your audience and opponent with too much information. Be able to back up a few main arguments with facts from credible resources and interviews.
7. Stick with facts and true stories rather than sharing feelings. A debate could be considered a form of persuasive speech. You are trying to persuade your opponent, and any audience members, that your side of the issue has validity. You can more readily do this if you present accurate facts and examples. For instance, you might share some of the success stories from your local veterinarian. If you use feelings, such as saying that, "I feel the animals will be more comfortable if you don't give them shots," your argument could be weakened.
8. Plan a good summary for your ending. Your last opportunity to speak (which may be called your "rebuttal") will stick in the minds of your opponents and audience if it is strong, accurate, and thought-provoking. It should be the most powerful part of your debate. You could use a question or two to leave your audience thinking. For example, you could end the above topic with, "If your best friend - in this case, your dog - was very sick, which method would you feel more comfortable with?"

Debates can be an opportunity to learn about other opinions, to strengthen your own viewpoints, or to give you
good practice in being objective if you are assigned a topic you don't feel particularly passionate about. A good debater can take any side of an issue and present it in a way that is professional and respectful, and that invites critical thinking. Approach your assignment with that goal, and you will be well-underway to a great speech -and that's not debatable!

## That's Debatable!

## Questions

1. What are the two examples given of when debate is used?
$\qquad$
$\qquad$
2. Why is it important to know your subject well?
$\qquad$
$\qquad$
3. Which of the following means is not listed as a way to do research?
A. read books
B. interview an expert
C. poll your friends
D. search the Internet
4. You do not have to understand the opposing view in order to debate well.
A. true
B. false
5. The author recommends that you be prepared for $\qquad$ .
$\qquad$
$\qquad$
6. Which is more persuasive in a debate -- sharing facts or feelings?
$\qquad$
$\qquad$
7. What is the most powerful part of your debate?
8. How can you describe a good debater?

Find 7\% of 22.
Change to a percent.
$\frac{1}{3}=\frac{2}{?}$ $\frac{28}{10}$
$17 x-9.1=101.4$
What is the value of $\dagger$ ?
$8+(2 \times 11)+4-4$
$3 \times 3 \times 3 \times 3 \times 3=3^{x}$
What is the value of $x$ ?
If $t=4$ and $h=-19$ then
what is the value of $n$ ?
$7 \mathrm{~h}-10 \mathrm{~h}-3 \mathrm{~h}=\mathrm{n}$

At the dive meet Justin received scores of $7.4,8.7$, $7.9,8.9$, and 9.5 . The largest and smallest scores were dropped and the rest were averaged for a final score and rounded to the nearest tenth. What is the final score Justin received?

What is the prime factorization of 78?

Convert $30 \frac{11}{12}$ to an improper fraction.

Name:

| Write the reciprocal. |
| :--- |
| 8 |
|  |
|  |



## Write the reciprocal. 17

$24-m=18$

$9+n=41$

Sketch 2 lines $\overleftrightarrow{\mathrm{DE}}$ and $\overleftrightarrow{\mathrm{TU}}$ that are parallel.


What kind of angle is this?


Name: $\qquad$

This puzzle has a large number in the middle, which is the sum of the four numbers that surround it.

$$
9 \frac{1}{2}+6 \frac{1}{2}+11+\frac{-3}{5} \quad 9 \frac{1}{2}+-3 \frac{1}{2}+6 \frac{1}{2}+10
$$



Sample:


Fill in the missing numbers. How? The sum of the four surrounding numbers is in the center of each square. Exactly one of the four numbers has to be one of these numbers: $-3 \frac{1}{2}, \frac{-3}{5}$, or $-2 \frac{8}{9}$. The other three numbers have to all be DIFFERENT and must be from these: $9 \frac{1}{2}, 11,10$, or $6 \frac{1}{2}$


Name:
Fill in the missing numbers. How? The sum of the four surrounding numbers is in the center of each square. Exactly one of the four numbers has to be one of these numbers: $\frac{-3}{4},-3 \frac{5}{7}$, or $-1 \frac{1}{4}$. The other three numbers have to all be DIFFERENT and must be from these: $4,5 \frac{1}{2}, 5$, or 12 .


Name: $\qquad$
What is the greatest
common factor of the
numbers 70 and 56 ?
$\frac{1}{36}, \frac{1}{6}, \ldots,(6)$,
$(36), \quad(216), \quad(1,296)$,
$(7,776), \quad(46,656)$
$|-7|+b=3$
$b=$

Rewrite as an algebraic expression or equation.

Twelve subtracted from a number is forty-one.

If $m=-7$ and $n=46$ then what is the value of $v$ ? $8 m-15 n+2 n=v$
$y=x+13$
$y=22$
What is the value of $x$ ?
$2 \times 36 \div 3-27 \div 9=$
Simplify.
$\frac{11,700}{35,100}=$

## $5 \times 5 \times 5 \times 5=Z^{Y}$

What is the value of $Z$ and $y$ ? p?
$t-7+\dagger=43$

## Rewrite $\frac{11}{25}$ as a decimal.

Rewrite $\frac{31}{100}$ as a decimal.

If $m=12, g=-3$, and $p$
$=11$ then what is $\mathrm{m} \cdot \mathrm{g} \cdot$

What is the value of t ?
The angles in a quadrilateral measure $91^{\circ}, 84^{\circ}, 86^{\circ}$, and $b^{\circ}$. What is the value of $b$ ?

Circle the percentage that is closest to 31 out of 55 :

## 65\%

15\%
96\%
65\%
edhelper.com

## The World's Longest Rivers: the Yangtze River

## By Cindy Grigg

The Yangtze River, also called the Chang, is the third-longest river in the world. The Yangtze begins high in the snowy mountains of western China. More than 700 smaller streams and rivers drain into the Yangtze on its 3,988 mile journey across China. The river and its tributaries drain one-fifth of China's land. The river's mouth is found near Shanghai, China's largest city, where it empties into the East China Sea. More than one-third of China's population lives along the river. In eastern China, the river is wide and deep enough for large ships to travel from the ocean to the city of Wuhan. In western China, the river passes through narrow gorges between steep mountains. Dams
 have been built on the river to make electricity. The Three Gorges Dam, built in 2006, is the largest hydroelectric power station in the world. Parts of the river have been protected as nature reserves. The river is home to at least three critically endangered species.

The World's Longest Rivers: the Yangtze River

## Questions

1. Which direction does the Yangtze River flow?
2. What fraction of China's people lives along the river?
A. more than one-half
B. more than one-third
C. more than one-tenth
D. more than two-thirds
3. The Yangtze drains about what percent of China's land?
A. twenty
B. ten
C. fifty
D. none of the above
4. Where is the mouth of the Yangtze?
A. near Tibet
B. at the Mediterranean Sea
C. near Beijing
D. near Shanghai


Name:
Wendy and Mary made packages of shampoo, soap, and combs. They had 108 bottles of shampoo, 105 bars of soap, and 100 combs. What is the greatest number of identical packages they could make without any items left over?

Fowl Foods makes only chicken and turkey TV dinners. They put either mashed potatoes, french fries, or rice with each dinner. They also include a vegetable choice - broccoli, carrots and peas, or green beans. How many different dinners can they make?

Kevin is late for work. He has to drive his triscooter from his house on Road One to his office on Road Four. The trip is about 15.5 km . How long will it take him to get there if his average speed is $29 \mathrm{~km} / \mathrm{hr}$ ?

Charles Lindbergh flew from Roosevelt Field, New York, to Le Bourget Field in Paris, France. He flew the 5,810 kilometers in 33.5 hours. What was his average speed? Round your answer to the nearest hundredth.


Name:
Complete each pattern. Write what the rule is.

$$
\begin{array}{r}
20 \frac{8}{15}, 20 \frac{1}{3}, 20, \\
18 \frac{11}{15}, 18 \frac{7}{15}, 19 \frac{4}{15}, 18 \frac{14}{15}, \\
18 \frac{1}{5}, 17 \frac{13}{15}, 17 \frac{2}{3}, 17 \frac{1}{3}
\end{array}
$$

$$
\overline{16 \frac{4}{15}, 16 \frac{1}{15}, 15 \frac{11}{15}, 15 \frac{8}{15}, 15 \frac{1}{5}, 15,14 \frac{2}{3}}, 16 \frac{4}{5}, 16 \frac{3}{5},
$$

Subtract $\frac{1}{3}$, then subtract $\frac{1}{5}$; Repeat.

Complete each pattern. Write what the rule is. HINT: The first three numbers in each pattern are random numbers.
$10,8,4,22,34,60,116,210,386,712$,
$9,24,7,40,71,118,229,418,765,1412,2595,4772$,

Name: $\qquad$


Equations and Hints:
Each letter is a whole number.
Fill in the equations using the chart:

$$
B \times A+B=24 \quad A \times A+B=\ldots \quad{ }^{+}+\ldots+=12
$$

$$
\ldots_{+}^{+}+\ldots=20
$$

Additional hints:

$$
B<12 \quad B=A+3
$$

Show Work:
? =

## Name:




Flip each figure along the axis line.


Flip each figure along the axis line.


Name: $\qquad$
Guess the number in your head. Keep guessing until your numbers are correct.
Then write the correct answer!

$$
\begin{aligned}
& \text { (3) }+(3)+(3)=48 \\
& \text { (3)- }-=4 \\
& \text { (3) }+ \text { - }= \\
& \xrightarrow{ } \\
& \because=-\quad=
\end{aligned}
$$



## By Mary Lynn Bushong

If you had a dream, could anything stop you from trying to reach it? When Chris Hartwick was born on February 6, 1969, he had a problem. It was called arthrogryposis multiplex congenita. It can affect any of the muscles in the body. In Chris, it kept the muscles in his arms and chest from developing.

From the time he was very young, Chris showed great artistic talent. While you might hold a pencil or paintbrush in your hand, Chris used his mouth. As he grew up, people constantly asked him if he was going to be an artist. At first, he didn't think he would, but when he went to college, he decided to major in graphic design.

When he was in his teens, Chris was often discouraged with the things he could not do. He couldn't drive a car or play sports like baseball or basketball. Then, through his faith, he realized that there were many things that he could do, and the only limits were the ones he put on himself.


When Chris was very young, people looked at his disabilities and said, "You won't make it; you're handicapped: you can't do it; you'll get hurt." Instead of believing them, he chose to try to succeed with the help of family and friends.

There is little that Chris hasn't been able to do. He enjoys sports like bowling, ping pong, miniature golf, soccer, and volleyball. He is also completing his black belt in karate. He cooks and is able to live alone. Chris even teaches CPR when he's not working on his art.

The people who thought that Chris would never be able to live a full and active life have been proven wrong. He's not only a graphic artist and computer animator but also an artist who exhibits his art.

Chris didn't let others limit his abilities. Are you letting others limit yours?

No Limits

## Questions

1. Chris holds his paintbrush with his $\qquad$ .
A. toes
B. hands
C. mouth
D. none of the above
2. Which sport did Chris NOT play?
A. bowling
B. ping pong
C. basketball
D. miniature golf
3. Chris is working on his $\qquad$ belt in karate.
A. yellow
B. black
C. brown
D. red
4. What life saving course does Chris teach?
$0.3 \cdot 5=$
$7+11 \times 9+12$
$\frac{12}{44} \div \frac{10}{11}=$
$17 \mathrm{~b}-14.8=105.9$
$b=$
What is the remainder of
$|-14|+g=22$
47 divided by 13 ?
$g=$
$6,8,8,18$, ____ 28,12 ,
Simplify.
$\frac{4}{18}=$
$38,14,48,16,58,18,68$ the missing section be?


In what quadrant would you find the point (-1, -14)?
$\qquad$

Mr. Bloop drives 17 kilometers at an average speed of $55 \mathrm{~km} / \mathrm{hr}$. Mrs. Bloop drives the same distance at an average speed that is 4\% faster than Mr. Bloop's. How long does it take her to travel the 17 km distance? Round your answer to the nearest hundredth of a minute.

Peter wanted to make a poster for Save Your Smile Week. He thought it would be fun to put how many minutes someone might spend brushing and flossing each year on the poster. If a person spends 21 minutes per day brushing and flossing, how long would that person spend in a year? (Use 365 days for one year.)

## What number multiplied by -7 results in a product of $-49 ?$

Write the number that when multiplied by 7 is -63 .

Erin lives at the point ( $12,-111$. She wants to go to the closest mall. There are two malls on the map. Mall AA is at ( $15,-5$ ), and Mall BB is at ( $10,-18$ ). On the map she can only travel vertically or horizontally, one unit at a time. She cannot go diagonally. So she could go from $(1,3)$ to $(1,4)$ or $(1,3)$ to $(2,3)$, but not from $(1,3)$ to $(2,4)$. Which mall is closer to her?

Jacob and Eric wanted to make a telephone of their own. They talked to Jacob's father and he told them how he had made a telephone with his best friend using paper cups, strings and buttons! They decided to try it. They found two strong paper cups, two buttons, and a big roll of thread. The label said the thread was 200 feet long. They used $\frac{4}{5}$ of the thread to make their telephone. How many feet of thread did they use?

Half of the students in the fourth grade at Geneva Elementary don't know the fable "Androcles and the Lion." If 84 students in the fourth grade don't know about "Androcles and the Lion", how many students are in the fourth grade at Geneva Elementary?

## Mrs. Jackson bought

 22.4 pounds of tomatoes for the Hamburger Day Cookout. The tomatoes cost $\$ 0.60$ per pound. What was the total cost of the tomatoes?Connor spent $\$ 10.29$ for a cheese pizza and $\$ 1.30$ for each of the two toppings. How much did he spend in all?

Mr. Martinez pays 8 men $\$ 9.30$ per hour to help him harvest his corn crop. Last week the men worked 37.1 hours each. How much did Mr. Martinez pay the 8 men?

Name:

In one part of a rainforest,
Dr. Rainbrain calculated that a $2 \frac{1}{2}$ acre piece of land has 2385 trees. At
that rate, how many trees
might be contained in 12 acres?

David left school with $\$ 15$. He had $\$ 3.50$ left after buying a book about inventors for \$6.35, 2 snacks for $\$ 0.95$ each, a drink for $\$ 1.75$, and paying for a bus ride home. How much did he pay for the bus ride?

According to police department estimates, the Picnic in the Park for Parents Day was attended by 9,850 people. What is the value of the digit " 8 " in that number?

## Jenna worked at the

 fair over the summer and earned $\$ 557$. She worked a total of 20 days. About how much money did she earn each day?Mr. Garcia bought 6 cheese pizzas for the party.
The girls ate $1 \frac{1}{2}$ pizzas. The boys ate $2 \frac{3}{4}$ pizzas. How much pizza was left over?

## Of the 84 students at

 Donya's Dance Studio, 10 are girls from 6 to 8 years old, and 11 are girls under age 6. What is the ratio of girls under age 9 to the total number of students? Write the ratio as a fraction in lowest terms.Name:

Hunter's class made apple fritters at the Fall Festival this year. Hunter brought fifteen cans of shortening to fill the fryer. Each can was twelve inches tall and had a radius of 7.2 inches. What was the total volume (in cubic inches) of the fifteen cans of shortening? Round your answer to the nearest cubic inch.

Jacob helped his father paint the kitchen. They used masking tape to keep the paint from getting on the windows. There were 6 windows in the kitchen and each window had two panes. If each pane was 28 inches wide and 21 inches high and Jacob tape the full length and width of each pane, how much masking tape did he use?

Anna planted 14 strawberry plants. For four weeks in a row, each plant produced 6 strawberries. Anna shared her strawberries equally among her 7 best friends and herself. How many strawberries did each person get?

Eric used 9 cups of sand to build his sandcastle. Then he decided he wanted to add a wall. He used a total of 14 cups of sand. How many cups did he use to add the wall? Write an equation and solve it.

Sara spent \$34 at the magic show. She bought an autographed picture of the Wonderful Wizard for $\$ 12.40$ and two T-shirts that were the same price. How much did she pay for each T-shirt?

By Brandi Waters

Dan Gutman was like a lot of people. He had an idea about what he wanted to do. He just didn't have all of the details figured out. He kept trying different things. It took him fifteen years, but he finally figured it out. He found a career that he was good at. It was fun. It made him feel good about himself. People appreciated his work. Finally, all of the pieces had come together.

Dan Gutman studied psychology in college. Psychology is the study of the human mind and behaviors. He got his degree but then decided to continue studying. After two years in graduate school, Dan Gutman decided that psychology was not for him. He wanted to be a writer.

In 1980, he moved to New York City and started writing. He wanted to write things that were humorous. He started writing as many humorous essays as he could. As it turned out, though, his essays weren't all that funny. Still, he was able to get a few of his essays published. The first piece of writing that he sold was to a local newspaper. They paid him fifteen dollars.


From there, he tried magazine articles. Then screenplays. Then he shopped around some book ideas. No one was interested. He had received hundreds of rejection letters. He had only been in New York City for a couple of years. He needed to try something else.

Next, he started his own magazine. It was about computer and video games. Video games were becoming the newest craze and the game Pac-Man was at the center of it all. He knew people would want to read about Pac-Man and other games. The magazine was quite successful for a few years, but in 1985, it went out of business. Dan Gutman had to start all over again.

Since he had built a reputation as a computer expert through his magazine, he started writing about computers. Slowly, he started writing about other subjects, too. He was becoming more successful. His writing was published in many different newspapers and magazines. Still, Dan wasn't happy. Next, he decided to try writing about something that he loved-baseball. He wrote a magazine article and several non-fiction books about baseball. The books were somewhat successful, and Dan enjoyed writing them a lot more than writing about computers. Dan Gutman was happy, but he was still thinking about what he could try next.

In 1992, his two-year-old son inspired him. Why not try writing for kids? At first, he wrote non-fiction books about sports. A few years later, he decided to try to write a fictional story. He didn't think he would be very good at it. Much to his surprise, he was wrong! He sold the first story that he wrote. It was a success. Even better, he really enjoyed writing it. He enjoyed it so much that he stopped trying to find the kind of work that he was meant to do. Writing books for kids was what he had been looking for.

Since that first book, Dan Gutman has written many more stories for children. A lot of them include baseball in some way. Kids often tell Dan that his stories make them laugh. And making people laugh is what he wanted to do all along.

Dan Gutman

## Questions

$\qquad$ 1. Dan Gutman studied psychology, the study of the human mind and $\qquad$ , in college.
A. diseases
B. sleep
C. behaviors
D. body
2. What is the meaning of the word humorous, as it is used in paragraph three?
A. funny
B. newspaper
C. mystery
D. factual
3. List three kinds of writing that Dan Gutman has tried.
$\qquad$
$\qquad$
4. What inspired Dan Gutman to start his own magazine?
5. What subject does Dan Gutman enjoy writing about most?
A. nature
B. computers
C. baseball
D. history
6. Of all of the kinds of writing that Dan Gutman has done, what has he enjoyed the most?
A. fiction books for children
B. non-fiction baseball books for adults
C. humorous essays
D. magazine articles about computers


Change $\frac{2}{10}$ to a decimal.

Name: $\qquad$
The EdHelper Clothes store at the mall has four employees (Cody, Michael, David, and Austin). This week they worked 43, 48, 40, and 27 hours. The employees at EdHelper Clothes are paid by the hour. Each employee is paid at a different hourly rate ( $\$ 14.70, \$ 14.86, \$ 14.40$, and \$14.98).

Figure out how many hours each employee worked this week. Also, determine each employee's hourly pay.

1. This week, David worked the most number of hours.
2. Cody earns the most amount of money per hour.
3. David had the largest paycheck for the week.
4. Michael worked more than twenty-seven hours this week.
5. Cody earned $\$ 599.20$ this week.
6. Austin earns more than $\$ 14.40$ per hour.

Cody worked $\qquad$ hours and was paid $\qquad$ hourly.

Michael worked $\qquad$ hours and was paid $\qquad$ hourly.

David worked $\qquad$ hours and was paid $\qquad$ hourly.

Austin worked $\qquad$ hours and was paid $\qquad$ hourly.


Name:


Name:

## By Beth Beutler

Many people make a party out of New Year's Eve. They often call it "ringing in the New Year." Some people prefer to stay home. Many watch New Year's Eve events on TV. One big event is watching a crystal ball go down a pole in Times Square in New York City. It happens at the stroke of midnight. There are huge crowds who wait many hours just to say they were there in person! Where will you be on New Year's Eve?


New Year's Eve

## Questions

$\qquad$ 1. Where does the writer say a big event takes place on New Year's Eve?
A. Times Square, New York City
B. Moscow
C. London
D. Chicago
2. What travels down a pole?
A. a crystal ball
B. streamers
C. a box
D. a flag
$\qquad$ 3. People celebrate New Year's Eve at $\qquad$ .
A. parties
B. home
C. public places
D. all of the above
4. Some people refer to the celebration as $\qquad$ .

Name: $\qquad$
$5+\frac{4}{11}+\frac{3}{5}=$
Reduce $\frac{8}{42}$ to its lowest terms.

$\square$
Write the reciprocal.
6


## John Harrison and Traveling Time

## By Cindy Grigg

By the 1700 s, people had been sailing across the oceans for many years. But there was a problem. Once a ship was out of sight of land, there was no way of knowing the ship's exact location. Misjudging a ship's position led to many tragedies at sea. Lives were lost, and so were supplies and even entire ships.

Sailors used instruments like the astrolabe to measure the positions of the sun, moon, and stars. This gave them some idea of where their ship was located north and south. But there was no way to find the ship's position east and west. A clock that could travel on ships and keep the correct time was needed.

The clocks of the day were useless at sea. Even some of the best clocks could lose ten minutes each day. This resulted in an error of 120 miles. The ship's motion and the salty sea air caused clocks to gain or lose time or even stop working altogether. A new invention was needed. In 1714, the British government offered a huge cash prize to anyone
 who could solve the "longitude problem."

Many people tried to solve the problem. Many scientists, including Sir Isaac Newton, and other highly educated men worked on it. They thought the answer lay in the stars. Sixteen years later, no one had an answer. Then a clockmaker named John Harrison thought he would try to invent a clock that could make time travel.

Harrison was the son of a carpenter. He had little formal education. He began inventing a new kind of clock in 1730. He worked on it for more than five years. His first clock was tested in 1736. It had two swinging balances that were joined. This made the clock stable so that the motion of the ship did not affect it. The clock worked in an early test across a short distance, but Harrison wanted to make it better. He wanted to build a clock "of great exactness."

He invented some new parts. He improved others. He reduced the friction of moving parts so that no oil was needed. He made two more clocks, each changed from the last. They were never tested. Then he made a sea watch.

His son, William, tested the watch on a trip across the Atlantic Ocean in 1761. When William arrived with it in Jamaica, the watch was five seconds slow. This amounted to a distance of about one mile. The British government believed the accuracy was "just luck." Harrison was not given his prize. A second trans-Atlantic test was demanded.

William and the watch made another journey from England to the island of Barbados. The watch kept time within thirty-nine seconds, an error in longitude of less than ten miles. Again, the accuracy of the watch was credited to luck. Harrison had a hard time collecting his prize money. He asked King George III for help. Finally, with the king's help, Harrison was awarded the money promised him in 1773. He was eighty years old and had given most of his lifetime to working on the "longitude problem."

Harrison's marine chronometer, as it was now called, was a milestone in navigation. Captain James Cook used a copy of Harrison's chronometer on a trip to circumnavigate the globe. Cook often praised the watch in his captain's log. His calculations of longitude based on the chronometer proved correct within eight miles on his around-the-world journey. Cook's detailed charts, made with the help of the chronometer, were so accurate they were still in use two hundred years later. John Harrison had given the world a practical solution to finding a ship's position at sea.

You can read more about John Harrison and his marvelous invention in Kathryn Lasky's book, The Man Who Made Time Travel.

Name:
John Harrison and Traveling Time

## Questions

$\qquad$ 1. Using your knowledge of Greek word meanings, what two words do you think "chronometer" came from?
A. old, length
B. metal, pattern in verse
C. time, measure
D. unit, width
2. In the last paragraph, what words help you understand what "circumnavigate" means?
A. help of the chronometer
B. the future of ocean travel
C. praised the watch
D. around-the-world journey
3. What is an astrolabe?
A. a type of ship
B. Harrison's first clock
C. a watch
D. an instrument for measuring the position of stars
4. Why do you think John Harrison sent his son William to test the watch?
5. When the government didn't pay Harrison the prize money, whom did he ask for help?
A. James Cook
B. Sir Isaac Newton
C. King George III
D. William
6. What type of text is this?
A. science fiction
B. humorous literature
C. informational text
D. fairy tale
7. Why was the invention of Harrison's marine chronometer a milestone in navigation?
A. It helped sailors keep accurate captain's logs.
B. It allowed ships to arrive on time.
C. It made ocean travel safer.
D. It worked even when the sky was cloudy.
8. Which of these happened first?
A. Harrison asked the king for help.
B. James Cook used Harrison's watch on a trip around the world.
C. The watch was taken to Jamaica.
D. William Harrison took the watch to Barbados.

Mrs. Johnson went to the Peanut Butter Lover's Month Bake Sale. She bought a peanut butter pie for $\$ 5.75$, 3 dozen peanut butter cookies for \$1.47 per dozen, and 6 peanut butter brownies for $\$ 1.56$ per dozen. How much did she spend in all?

Mr. Smith is making 20 ice cream sodas. He is using $\frac{3}{4}$ cup of ice cream in each soda. How many cups of ice cream will he need?

Jenna is making a quilt using 3-inch squares. She has 4 different colors. She wants to have 4 colors in a row (yellow, orange, red, and white). How many different
arrangements of the squares are possible?

Mrs. Allen gave each of her 3 children an equal amount of money to spend at the beach. She gave them $\$ 19.83$ in all. How much money did each child get?

Miss Robinson will teach
her students to make friendship bracelets tomorrow. She wants to organize all the materials today. Each student will need 6 pieces of thread. If each piece is $2 \frac{2}{3}$ feet long, how many feet of thread will each student get?

## Boston Marathon

 runners cover a distance of 26 miles, 385 yards. How far is that in meters? Round off your answer to three decimal places. (Note: 1 foot = 0.3048 meters)Name: $\qquad$
Mrs. Miller is the best gym teacher. "Today, we are going to play 1 on 1 basketball. Each game will be 3 minutes long, and you have to play everyone else in the class," Mrs. Miller said.
The gym has 6 basketball courts, and there are 12 kids in this class.
Everyone has to play everyone else. A game lasts 3 minutes, and there are about 30 seconds between each game. How long will it take to do this?

Show your work.

## By Sharon Fabian

There was music before there were people to listen to it. Birds sang. Wind whistled, and ocean waves crashed in a steady rhythm.

People have probably made music since their earliest days on Earth too. Maybe the first human music imitated the sounds of nature. Humans may have created songs in imitation of the sounds of other creatures. Once people had words to speak, maybe they also had words for songs. Simple hunting tools might have served as early percussion instruments. Simple flutes made from hollowed bones have been found that date back to 10,000 BC.

Archaeologists have found evidence that music was played in ancient civilizations, including ancient Egypt and Babylonia. Since early music was not written down, the earliest evidence of music is in the form of pictures showing musicians and musical instruments. Evidence of written music from more than 2,000 years ago has also been found.

A little further along in history, music began to divide into different types. One type, known today as western music, developed in Europe. Western music is based on a scale of nine notes. Other types of music developed in Asia, in Africa, and in Native American cultures.

Western music eventually developed into classical music and all of the different styles of popular music we hear today. It spread from Europe to the Americas.

Classical music developed gradually over many, many years in Europe. It grew from everyday songs and from church music. During the Renaissance, it began to grow into the classical music that we are familiar with today. In the following years, from the 1600s through the early 1800s, many of the most famous classical works were written. Bach, Beethoven, and Mozart wrote classical pieces that many of us recognize today, even if we don't know their names.

Classical music was popular in the United States in the early years of our country, but music from other parts of the world also came to America. In the early 1900s, combinations of music from different traditions around the world began to combine to create new American music. Jazz, a combination of African and European music, suddenly began to appear in cities across the United States. Many people say that New Orleans was the city where it was heard first. Musicians like Louis Armstrong brought jazz music to the American public.

Soon, all over America, people were tuning their radios to music stations to hear jazz, blues, and ragtime. Before long, young people were putting their coins into a jukebox to hear their favorite big bands play the latest tunes.

Radios, jukeboxes, and phonographs allowed a piece of music to be heard by many more people than in the past. Certain singers became "stars." Nat King Cole and Frank Sinatra were big stars in the years after World War II.

In the 1950s, musical styles combined again to form something new. The era of rock music began with popular singers like Elvis Presley and Chuck Berry. In the 1960s, the Beatles became the most popular rock group ever, with a worldwide following. New styles of music are still appearing as musicians combine favorite parts from different types of music. That is how we got country-rock, rhythm and blues, and all of the other choices that are available in the music store today.

Name:
Music from the Beginning

## Questions

$\qquad$ 1. Music was invented in the year $\qquad$ .
A. 1950
B. no one knows
C. $10,000 \mathrm{BC}$
D. 1960
2. The earliest archaeological evidence of music comes from $\qquad$ .
A. CDs
B. pictures
C. written music
D. tape recordings
3. Classical music began in $\qquad$ .
A. Europe
B. China
C. the United States
D. Egypt
$\qquad$ 4. Jazz began in $\qquad$ .
A. Egypt
B. Europe
C. the United States
D. China
5. In the 1600s through the 1800s when classical music was very popular, people probably listened to
$\qquad$ .
A. recordings
B. live music
C. radio
D. all of the above
6. The information in this article is given in which order?
A. chronological order
B. order of importance
C. size order
D. spatial order
7. This article is mainly about $\qquad$ .
A. the history of music
B. classical music
C. country music
D. famous musicians
8. Chuck Berry was a famous $\qquad$ musician.
A. jazz
B. rock
C. country
D. classical

Name: $\qquad$
The block below is the sum of the two blocks above. Fill in the missing blocks.


## Subscribe to Get Answer Keys

 ** and so much more!

## SUBSCRIBE TO RECEIVE EVEN MORE

Answer Keys • Effective Activities • Access to as many printables as you need!




