

William Floyd Union Free School District

of the MASTICS - MORICHES - SHIRLEY

Our rich history builds a promising future!

Kevin M. Coster
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William Floyd Middle School
Carolyn Schick, Principal
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This summer review packet is designed to help you make a smooth transition into your seventh grade math class. The problems review key concepts and skills that you have previously learned in sixth grade mathematics. You may use any notes, examples, and resources that you have to help you solve these review problems. There are also many online resources and websites that can provide you with helpful information and opportunities to review essential topics from last year. The sites listed below provide instructional videos, lessons, practice problems, and more to help you re-master these important topics.

www.khanacademy.org, www.freemathhelp.com, www.hippocampus.org, www.algebrahelp.com

The attached packet will be collected on Friday September 2nd. The summer review packet will be your first graded assignment for the first quarter of the 2016 – 2017 school year. In order to receive full credit, be sure to answer all questions and ***show all work or write an explanation that is necessary to solve each problem.***

Doing homework is more than just completing the problems on a page, it is a learning experience designed to help you succeed. We encourage you to work together with other classmates and collaborate to make the most out of this review experience.

It is strongly recommended that you break this assignment up throughout the course the summer and do a few problems each day. ***Do not leave the entire assignment for the day before school begins.***

Have a great summer.

Sincerely,

WFMS Grade 7 Math Teachers

WFMS Grade 7 Math Teachers



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Math Summer Assignment Schedule

JULY 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	9
10	11 Math 7th Grade Packet #1-2	12 Math 7th Grade Packet #3-4	13 Math 7th Grade Packet #5-6	14 Math 7th Grade Packet #7-8	15 TAKE A BREAK	16
17	18 Math 7th Grade Packet #9-10	19 Math 7th Grade Packet #11-12	20 TAKE A BREAK	21 Math 7th Grade Packet #13-14	22 Math 7th Grade Packet #15-16	23
24	25 TAKE A BREAK	26 Math 7th Grade Packet #17-18	27 Math 7th Grade Packet #19-20	28 Math 7th Grade Packet #21-22	29 TAKE A BREAK	30
31	Notes:					

Math Summer Assignment Schedule

AUGUST 2016

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Math 7th Grade Packet #23-24	2 Math 7th Grade Packet #25-26	3 TAKE A BREAK	4 Math 7th Grade Packet #27-28	5 Math 7th Grade Packet #29-30	6
7	8 Math 7th Grade Packet #31-32	9 Math 7th Grade Packet #33-34	10 Math 7th Grade Packet #35-36	11 TAKE A BREAK	12 Math 7th Grade Packet #37-38	13
14	15 Math 7th Grade Packet #39-40	16 Math 7th Grade Packet #41-42	17 Math 7th Grade Packet #43-44	18 Math 7th Grade Packet #45-46	19 TAKE A BREAK	20
21	22 Math 7th Grade Packet #47-48	23 Math 7th Grade Packet #49-50	24 Don't forget this math packet is your first assessment grade and due when you return to school. Put it somewhere safe when completed	25	26	27
28	29	30	31			
Notes:						
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Academic Calendar Template by Vertex42.com						

SIXTH to SEVENTH GRADE MATH SUMMER ASSIGNMENT

Directions: Read each question carefully and select the letter of the correct answer. You must **SHOW ALL WORK** or **GIVE AN EXPLANATION** for each question. Each question is worth two points, one point for the correct answer and one point for work shown.

1. (SNF7)

Solve: $\frac{1}{4} \div 8 =$

- a. $\frac{1}{32}$
- b. 32
- c. 2
- d. $\frac{1}{16}$

2. (SNF4)

Nathaniel had a jar that contained 126 coins. Out of all the coins, $\frac{6}{7}$ were pennies. How many coins were not pennies?

- a. 108 coins
- b. 77 coins
- c. 21 coins
- d. 18 coins

3. (6RP1)

Last year the girls' basketball team had 8 fifth-grade students and 7 sixth-grade students. What was the ratio of sixth-grade students to fifth-grade students on the team?

- a. 8:15
- b. 8:7
- c. 7:8
- d. 15:8

4. (5NF5)

Solve for y .

$$\frac{6}{1} \times \frac{5}{8} = 3\frac{y}{4}$$

- a. 1 b. 3 c. 2 d. 4

5. (6RP3)

If it takes 12 hours to mow 9 lawns, how many lawns can be mowed in 24 hours?

- a. 18 lawns
b. 17 lawns
c. 5 lawns
d. 32 lawns

6. (5NF3)

Mr. Price's gym classes are going to the city pool. Each bus holds 48 students and there are 125 students going to the pool. How many buses will the school need to reserve to take the students to the pool?

- a. 2 buses
b. 3 buses
c. 4 buses
d. 5 buses

7. (5NF2)

If you mix the rice vinegar and the ketchup, how many cups would you have in all?

- a. 3 cups
b. $3\frac{1}{4}$ cups
c. 4 cups
d. $4\frac{1}{4}$ cups

Sweet and sour sauce
2 cups rice vinegar
 $1\frac{1}{4}$ cups ketchup
6 tablespoons soy sauce
 $4\frac{1}{4}$ tablespoons brown sugar
 $1\frac{3}{8}$ teaspoons cornstarch

8. (5NF6)

Clark made a model of his house. His house is $30\frac{1}{2}$ feet long. The dimensions of the model were $\frac{1}{25}$ the dimensions of Clark's actual home. What is the length, in feet, of the model?

- a. $1\frac{10}{50}$
- b. $1\frac{11}{50}$
- c. $30\frac{23}{50}$
- d. $30\frac{27}{50}$

9. (5NF6)

What fraction could make the equation true?

$$\frac{1}{6} + \frac{1}{3} = \frac{2}{12} + \square$$

- a. $\frac{4}{12}$
- b. $\frac{3}{12}$
- c. $\frac{6}{12}$
- d. $\frac{1}{12}$

10. (GRP2)

The train that Nina is on covers 400 miles in 5 hours. How fast is the train moving?

- a. 66 mph
- b. 80 mph
- c. 81 mph
- d. 100 mph

11. (6N18)

Simplify:

$$4\frac{7}{8} + 3\frac{3}{16}$$

- a. $7\frac{1}{16}$
- b. $8\frac{1}{16}$
- c. $7\frac{5}{16}$
- d. $8\frac{3}{4}$

12. (6N5)

What property is shown in the equation below?

$$\left(\frac{2}{7} \times 9\right) \times 0 = 0$$

- a. Inverse property of multiplication
- b. Multiplication property
- c. Zero property of multiplication
- d. Associative property of multiplication

13. (6N7)

Which of the following number will complete the ratio table?

6	15
12	30
18	?
24	60
30	75

- a. 35
- b. 45
- c. 50
- d. 55

14. (6N22)

Simplify the expression below.

$$6^2 - 2^3 + 7$$

- a. 11
- b. 35
- c. 37
- d. 51

15. (6N4)

Which property states that any number, n , multiplied by 1 will equal that, n ?

- a. Inverse property of multiplication
- b. Associative property of multiplication
- c. Commutative property of multiplication
- d. Identity property of multiplication

16. (6N10)

Select the expression that shows a **proportion**.

- a. $\frac{1}{8} = \frac{5}{40}$
- b. $\frac{2}{8} = \frac{5}{40}$
- c. $\frac{1}{8} = \frac{6}{40}$
- d. $\frac{1}{6} = \frac{5}{40}$

17. (6N24)

Represent the following expression in **exponential** form:

$$9 \cdot 9 \cdot 9$$

- a. 729
- b. 9^2
- c. 9^3
- d. 81

18. (6N12)

If it takes 9 hours to mow 8 lawns, how many lawns can be mowed in 63 hours?

- a. 2 lawns
- b. 71 lawns
- c. 56 lawns
- d. 55 lawns

19. (6N13)

What is the **absolute value** of the point shown on the number line?



- a. 11
- b. -11
- c. 10
- d. 5

20. (6N9)

Which number completes the ratio to form a **proportion**?

$$\frac{2}{?} = \frac{16}{64}$$

- a. 9
- b. 12
- c. 8
- d. 16

21. (6N6)

Express the ratio in **simplest form**: 260 to 10

- a. 260 to 1
- b. 1 to 260
- c. 26 to 1
- d. 1 to 26

22. (6N8)

If Steven jogs at a pace of 5 miles per hour, how many miles can he jog in 2 hours?

- a. 20 miles
- b. 10 miles
- c. 15 miles
- d. 1 mile

23. (6N26)

Simplify: $3(7x - 8)$

- a. $13x$
- b. $21x - 24$
- c. $21x - 8$
- d. $7x - 24$

24. (6N11)

Students were asked to vote on their favorite food. Of the 100 students asked, 45 students chose pizza.

Another 25 students chose hamburgers. What percent of the students did not choose pizza or hamburgers as their favorite food?

- a. 45%
- b. 100%
- c. 30%
- d. 25%

25. (6N16)

Simplify:

$$\frac{8}{10} - \frac{2}{7} =$$

- a. $\frac{1}{10}$
- b. $\frac{18}{35}$
- c. $\frac{6}{3}$
- d. $\frac{1}{8}$

26. (6N20)

Change the following fraction to a decimal.

$$\frac{1}{10} =$$

- a. 0.001
- b. 0.10
- c. 1.0
- d. 1.10

27. (6N17)

Solve:

$$10 \div 4\frac{2}{3} =$$

- a. $2\frac{1}{3}$
- b. $1\frac{1}{3}$
- c. $46\frac{2}{3}$
- d. $2\frac{1}{7}$

28. (6N3)

Which answer choice shows how to the **distributive property** can be used to simplify the expression show below?

$$4 \cdot 132 =$$

- a. $132 \cdot 1$
- b. $4 \cdot 132 \cdot 0$
- c. $(4 \cdot 100) + (4 \cdot 30) + (4 \cdot 2)$
- d. $132 \cdot 4$

29. (6N2)

Which expression displays the **commutative** property?

- a. $a + b = a + b$
- b. $a + a = 2a$
- c. $ab = ba$
- d. $2b = b + b$

30. (6N1)

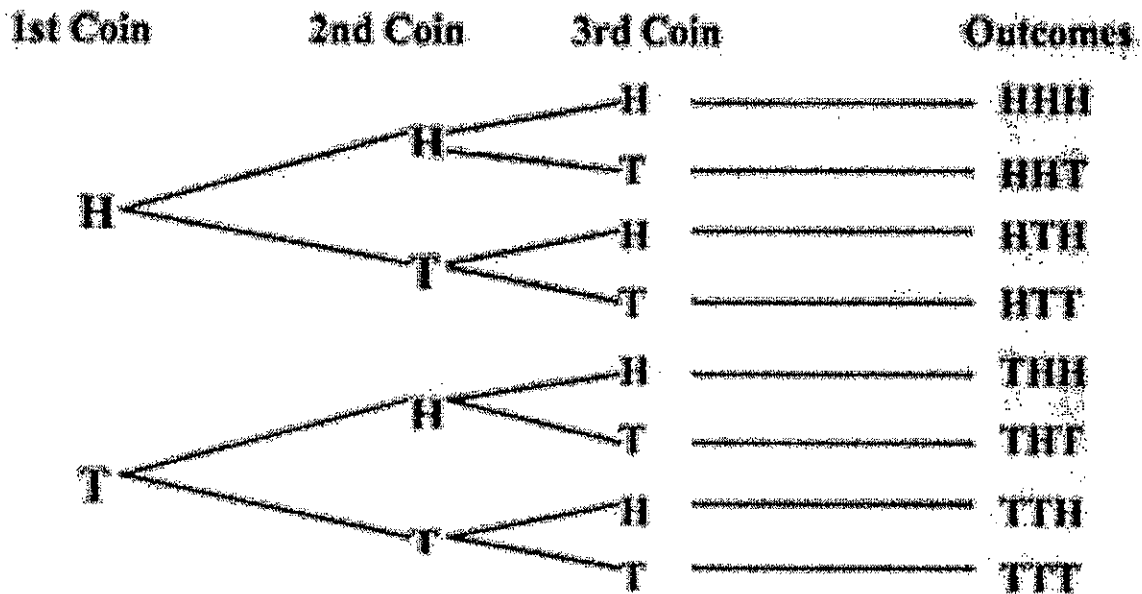
What is the value of the digit 4 in the following number?

123,456,789,012,300

- a. 400 billion
- b. 4 billion
- c. 4 trillion
- d. 40 billion

31. (7SP8)

According to the tree diagram below, what is the probability of flipping a coin three times and having the coin land on heads two times, and tails one time?



- a. 0.3
- b. $\frac{3}{8}$
- c. $\frac{1}{4}$
- d. 0.5

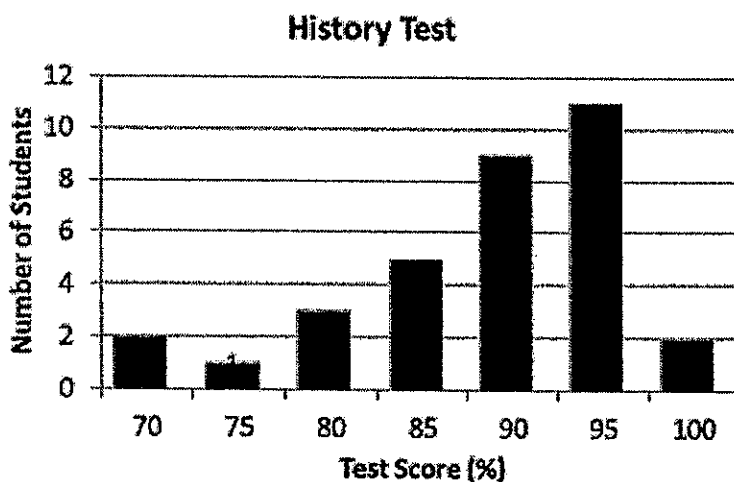
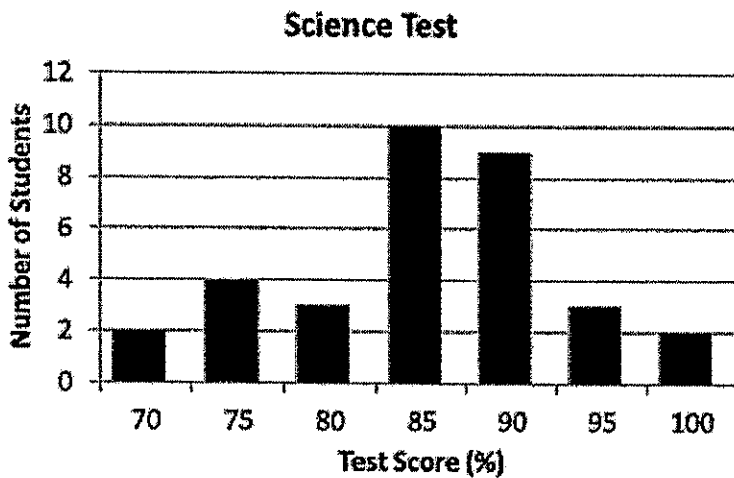
32. (7SP5)

A spinner is divided into 8 equal regions, numbered 9 through 16. An arrow is spun and lands on one of the numbers. What is the probability of the arrow landing on an even number?

- a. 0.25
- b. 0.5
- c. 0.75
- d. 1.25

33. (7SP4)

Look at the sets of data below. What are the median scores of each test?



- a. The median score of the science test is 90%. The median score of the history test is 85%.
- b. The median score of the science test is 80%. The median score of the history test is 95%.
- c. The median score of the science test is 85%. The median score of the history test is 90%.
- d. The median score of the science test is 90%. The median score of the history test is 95%.

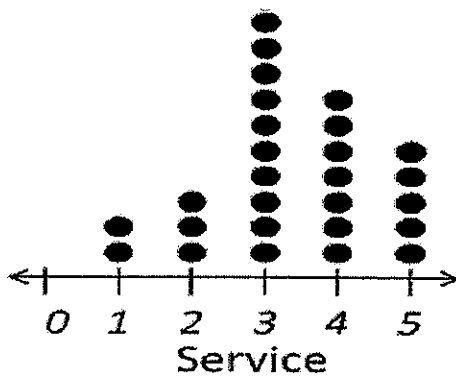
34. (7SP6)

A storeowner made a list of the number of greeting cards sold last month. The store sold 167 thank-you cards, 285 birthday cards, and 56 blank cards. Based on these data, which number is closest to the probability that the next customer will buy a blank card?

- a. 0.11
- b. 0.33
- c. 0.56
- d. 0.89

35. (6SP2)

After visiting a local restaurant, a group of people were able to rank the service they received and the quality of the food on a scale from 0 to 5, 5 being the best. Each dot represents a customer's response. The results are shown below.



Based on the data, which of the following statements is true?

- a. A majority of the people ranked the service and quality of food as being very poor.
- b. More people ranked the quality of food than the service.
- c. Overall, the people felt the service was better than the quality of the food.
- d. A majority of the people ranked the service and quality of the food as being very good.

36. (SNF7)

Deb has a board that measures 5 feet in length. How many $\frac{1}{4}$ foot-long pieces can Deb cut from the board?

- a. 1
- b. 9
- c. 10
- d. 20

37. (5MD1)

The sign below shows the length of a trail in a park.



$$1 \text{ mile} = 5,280 \text{ feet}$$

What is the length, in feet, of the trail?

- a. 5,280
- b. 5,720
- c. 15,840
- d. 17,160

38. (6EE6)

The following equation shows the relationship between the number of fish caught on a family trip, and the days spent on the trip.

$$f = 3d$$

The variable f represents the number of fish caught. The variable d represents the number of days spent on the trip. If the family spends 5 days on their trip, how many fish will they catch?

- a. 21
- b. 0
- c. 3
- d. 15

39. (6EE9)

Stacy is driving 25 miles per hour. This can be represented by the equation $m = 5h$ where m represents the miles driven and h represents the hours spent driving. Which of the following is the dependent variable?

- a. Miles driven
- b. Hours spent driving
- c. Rate of speed
- d. None of the above

40. (6EE9)

In the equation $y = 8x$, y is the dependent variable and x is the independent variable. What happens to the dependent variable as the independent variable increases?

- a. The dependent variable increases.
- b. The dependent variable decreases.
- c. The dependent variable stays the same.
- d. The dependent variable first decreases and then increases.

41. (6EE5)

Which of the values for y makes the following inequality correct?

$$y < 3 + 6$$

- a. 11
- b. 9
- c. 7
- d. 13

42. (6SP5)

Below is a random sample of heights recorded in a middle school. What is the mean height of the data?

65 in.	68 in.	58 in.	60 in.
59 in.	60 in.	62 in.	67 in.
60 in.	66 in.	68 in.	70 in.

- a. 60.5 inches
- b. 63.6 inches
- c. 58.4 inches
- d. 67.2 inches

43. (6SP1)

Which of the following is **not** a statistical question?

- a. How much money does each of the cell phone companies charge for text messaging?
- b. What price does the company charge for each of the different cell phone plans?
- c. How much more money does cell phone A cost than cell phone B?
- d. How many text messages are included for each of the different cell phone plans?

44. (6EE5)

Danielle has k bottle caps saved. Alexis has 20 more bottle caps saved than Danielle. Which expression represents the number of bottle caps that Alexis has?

- a. $k + 20$
- b. $20 - k$
- c. $k - 20$
- d. $20k$

45. (6EE6)

Alex had 54 DVDs and his mom bought him d more DVDs. Which expression represents the number of DVDs that Alex has now?

- a. $d - 54$
- b. $54 + d$
- c. $54 - d$
- d. $54 + 2d$

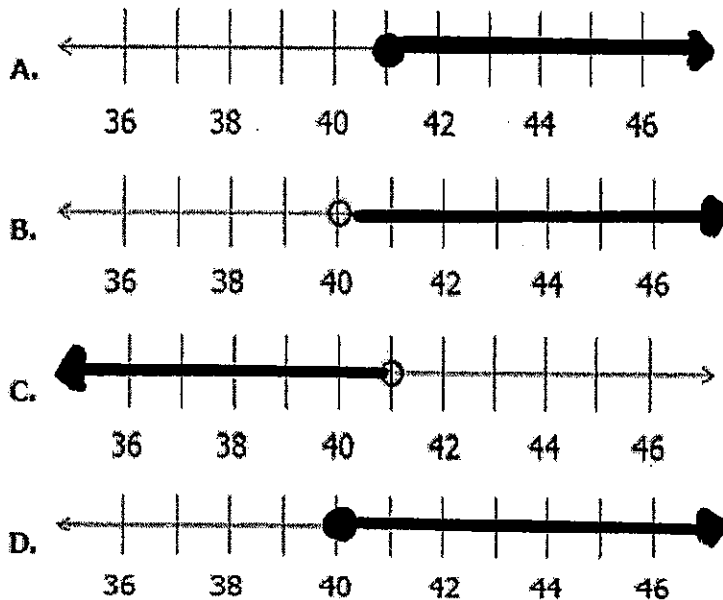
46. (6EE7)

Nadia bought 5 tickets to attend a spaghetti supper fundraiser at her school. The equation $5x = 32.50$ can be used to find x , the cost of each ticket in dollars. Which equation represents the cost of each ticket?

- a. $x = \frac{32.50}{5}$
- b. $x = 32.50(5)$
- c. $x = 32.50 - 5$
- d. $x = 32.50 + 5$

47. (6EE8)

Thomas needs to get at least 40 of his friends to like a link on his social medium page to qualify for a free lunch from one of his favorite fast food chains. Which number line below represents this inequality?



48. (6EE7)

Paul bought a package of 6 spiral notebooks for a total cost of \$13.50. Which equation represents p , the cost, in dollars, of each notebook?

- a. $p = 13.50 - 6$
- b. $p = 13.50 \cdot 6$
- c. $p = 13.50 + 6$
- d. $p = 13.50 \div 6$

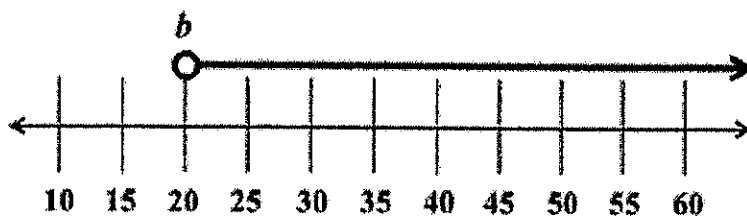
49. (6EE6)

Cassandra has 88 pieces of candy after Halloween night. She gives away c pieces of candy to her siblings. Which expression represents the amount of candy she has left?

- a. $c + 88$
- b. $c - 88$
- c. $88 \div c$
- d. $88 - c$

50. (6EE8)

Which inequality represents the graph below?



- a. $b < 20$
- b. $b \geq 20$
- c. $20 \geq b$
- d. $20 < b$

Name: _____

Due Date: _____

| **Directions:** Read the passage below and answer the questions that follow.

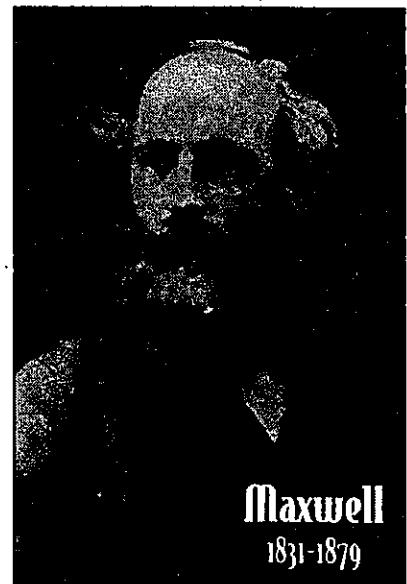
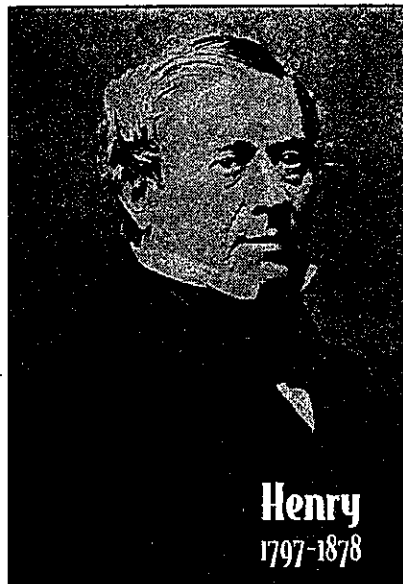
Who Invented the Radio?

Radio is a very important means of communication. It has become a part of our daily life. The radio has made it possible for people to communicate with each other over great distances. From the 1920s to the 1950s, people used radios in much the same way as televisions are used today. Millions of families would gather around a radio to listen to entertaining programs and music. They would also listen to the radio for the news. They could learn what was happening around the world much more quickly than they could before radio was invented. Radio is still popular today. Now there are car radios, portable radios, and headsets. People can listen to the radio almost anywhere.

Radios have many important uses. There are radios that allow airplane pilots, police officers, sailors, and others to communicate over long distances. Scientists use radio waves to learn about the weather.

A radio works by changing sounds or other signals into radio waves. These radio waves can travel at the speed of light. This means they can travel 186,282 miles in one second!

Many people contributed to the development of the radio. In the early 1830s, Joseph Henry, a college professor in the United States, and Michael Faraday, a scientist in England were conducting research and **formulating** theories. Working independently, each developed the same theory: electricity in one wire can produce electricity in another wire, even though the two wires are not connected. About 30 years later, another scientist named James Maxwell used their theory to come to the conclusion that electromagnetic waves did exist. Heinrich Hertz, a German scientist, later performed experiments to prove that this was true.



At about the same time, Nikola Tesla began experimenting with electrical motors, coils, and other devices. Many of the things he used were similar to those that are used in today's radios and televisions. Tesla, an inventor, developed the concepts and built a model radio. But it was Guglielmo Marconi who developed the first working radio.

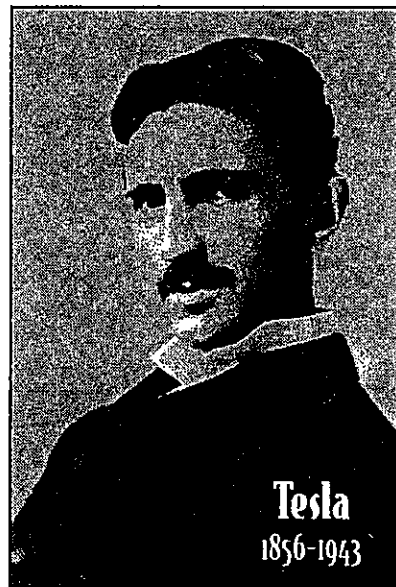
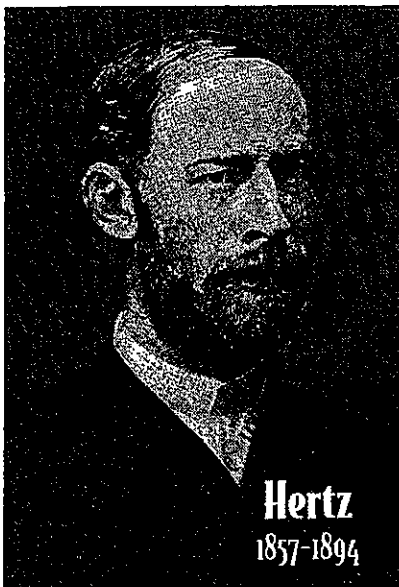


Marconi, an Italian scientist, had studied the experiments that were performed with electromagnetic waves. He began his own laboratory experiments and succeeded in sending a wireless signal over a distance of one and a half miles. It became known as wireless telegraphy. Today, it is called a radio.

Marconi continued his experiments. In 1899 he transmitted a signal more than 60 miles to a boat at sea. This was an important step. It proved that electromagnetic waves were able to follow the curve of Earth's surface. This meant that wireless telegraphy could be used over even greater distances. In 1901 Marconi sent a wireless signal from England to Canada. This was the first wireless communication across the Atlantic Ocean.

Marconi was awarded the Nobel Prize in physics in 1901. He certainly deserves credit for being the first person to succeed at using wireless communication. But Tesla had demonstrated the basic principles and built the first model radio. He did that years before Marconi began his experiments. In 1943 the United States Supreme Court recognized Nikola Tesla as the inventor of the radio.

The debate over who invented the radio still continues. Perhaps the radio, like so many other inventions, should be viewed as a group effort. Many people have built upon each other's work. Many have added their own contributions. Today's cell phones are just one example of how wireless communication continues to change. Undoubtedly more improvements lie ahead, but only time will tell.



1 Who was successful at sending the first wireless signal?

- (A) Nikola Tesla
- (B) Joseph Henry
- (C) Heinrich Hertz
- (D) Guglielmo Marconi

2 What is this passage mostly about?

- (A) how the radio became popular
- (B) the world's greatest scientists
- (C) the history of communication
- (D) people who helped to invent the radio

3 Which of the following happened after Marconi won the Nobel Prize?

- (A) Marconi built the first working radio.
- (B) Tesla was given credit for inventing the radio.
- (C) Hertz proved the existence of electromagnetic waves.
- (D) Henry developed the same theory as Faraday.

4 Read the statement below from the passage.

"Joseph Henry, a college professor in the United States, and Michael Faraday, a scientist in England, were conducting research and *formulating* theories."

What does the word *formulating* mean as it is used in this sentence?

- (A) arguing
- (B) printing
- (C) drawing
- (D) developing

5 The first wireless communication across the Atlantic Ocean was sent from

- (A) Canada to Italy
- (B) England to Italy
- (C) England to Canada
- (D) France to Canada

6 Which of the following events caused James Maxwell to conclude that electromagnetic waves existed?

- (A) Tesla built electrical motors.
- (B) Hertz proved electromagnetic waves existed.
- (C) Marconi used wireless telegraphy to communicate.
- (D) Faraday and Henry developed a theory about electrical currents.

7 Explain how the radio was at one time similar to television today.

Respond
on
Lined
Paper

8 Which of the following statements from the passage is an example of an opinion?

- (A) Scientists use radio waves to learn about the weather.
- (B) Perhaps the radio, like so many other inventions, should be viewed as a group effort.
- (C) There are radios that allow airplane pilots, police officers, sailors, and others to communicate over long distances.
- (D) Today's cell phones are just one example of how wireless communication continues to change.

9 Which of the following will most likely happen in the future?

- (A) Radios will replace televisions in most homes.
- (B) Tesla will be awarded the Nobel Prize in physics.
- (C) Marconi will be given credit for inventing the radio.
- (D) People will continue to invent new ways to communicate.

10 Why is the invention of wireless communication important?

- (A) People could listen to music.
- (B) It eliminated the need for telegraphy.
- (C) It made it possible to communicate using sound.
- (D) It made communication over great distances possible.

11 Why did the Supreme Court state that Tesla was the inventor of the radio?

- (A) He did most of the work.
- (B) He was smarter than Marconi.
- (C) He experimented with coils used to make radios.
- (D) He created the first model based on concepts he developed.

12 Why does the author of this passage believe that inventing the radio was a group effort? Use details from the passage to support your answer.

Respond
on
Lined
Paper

13 What type of book should you read to learn more about Nikola Tesla?

- (A) a novel
- (B) an atlas
- (C) a dictionary
- (D) a biography

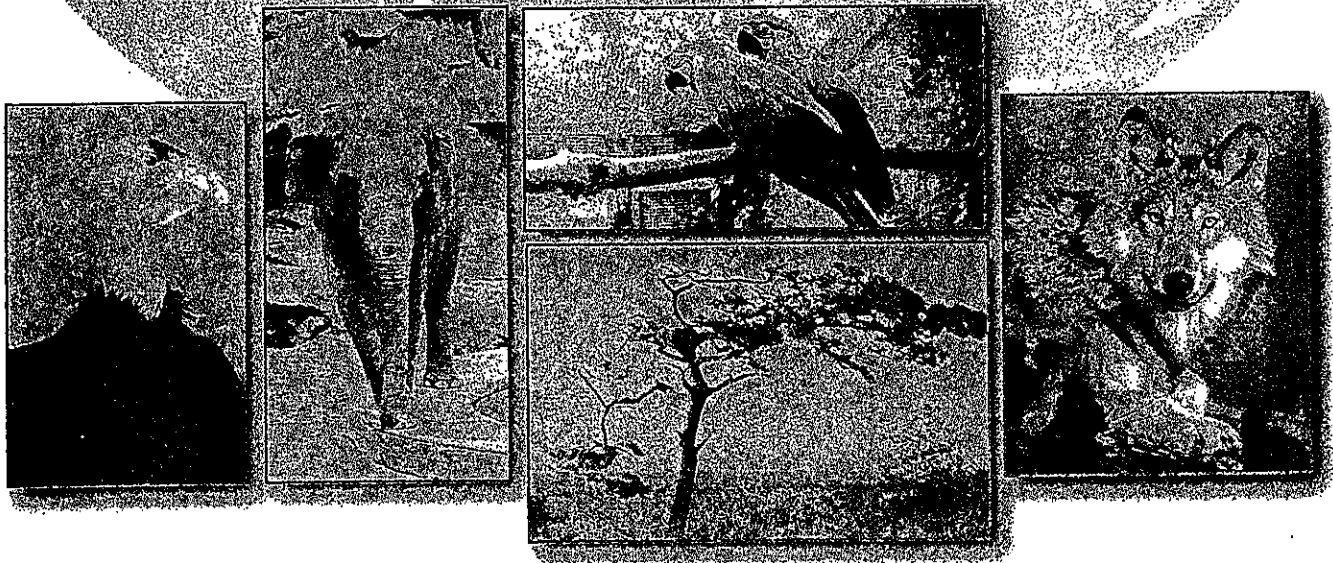
14 Which of the following is an example of wireless telegraphy?

- (A) A person listens to the radio in a car.
- (B) A person sends an e-mail using a computer.
- (C) A person plays a video game using a television.
- (D) A person mails a letter to someone who lives far away.

Directions: Read the passage below and answer the questions that follow.

Educate Yourself about Wildlife Conservation!

Our planet is full of a great diversity of plants and animals. Wildlife conservation is the wise management of our planet's resources for the benefit of all living things. Unfortunately, throughout history, many species, or types of plants and animals, have become extinct. This means that they no longer exist. As time has passed, many species of plants and animals have been replaced by new species, or have been eliminated by changes in the environment. In recent years, there has been cause for much concern, as the amount of wildlife in danger of becoming extinct has risen at an alarming rate. Many of the plants and animals that live on our planet have become very scarce.



Classifications of Scarce Wildlife

The three main classifications used to refer to plants and animals that face possible extinction are: endangered, threatened, and rare.

Endangered: This term is used to refer to plants and animals that face the most serious threat of extinction. Endangered species require *intervention* and protection by humans in order to survive. The California condor is an example of an endangered species. There are only about one hundred twenty left on the entire planet—most of them in captivity.

Threatened: A species that is threatened may be abundant in some areas, but its population has decreased greatly and faces serious threats. The gray wolf is an example of an animal species that is threatened. Although there are large numbers of gray wolves in some parts of the world, its worldwide population has steadily decreased, in part due to hunting, trapping, and poisoning.