

## BridgePrep Academy of Village Green

A Bilingual Academy for Learning  
"Where learning is a Journey"

# 6<sup>th</sup> Grade

## Math Spring Break Packet

Student Name: \_\_\_\_\_

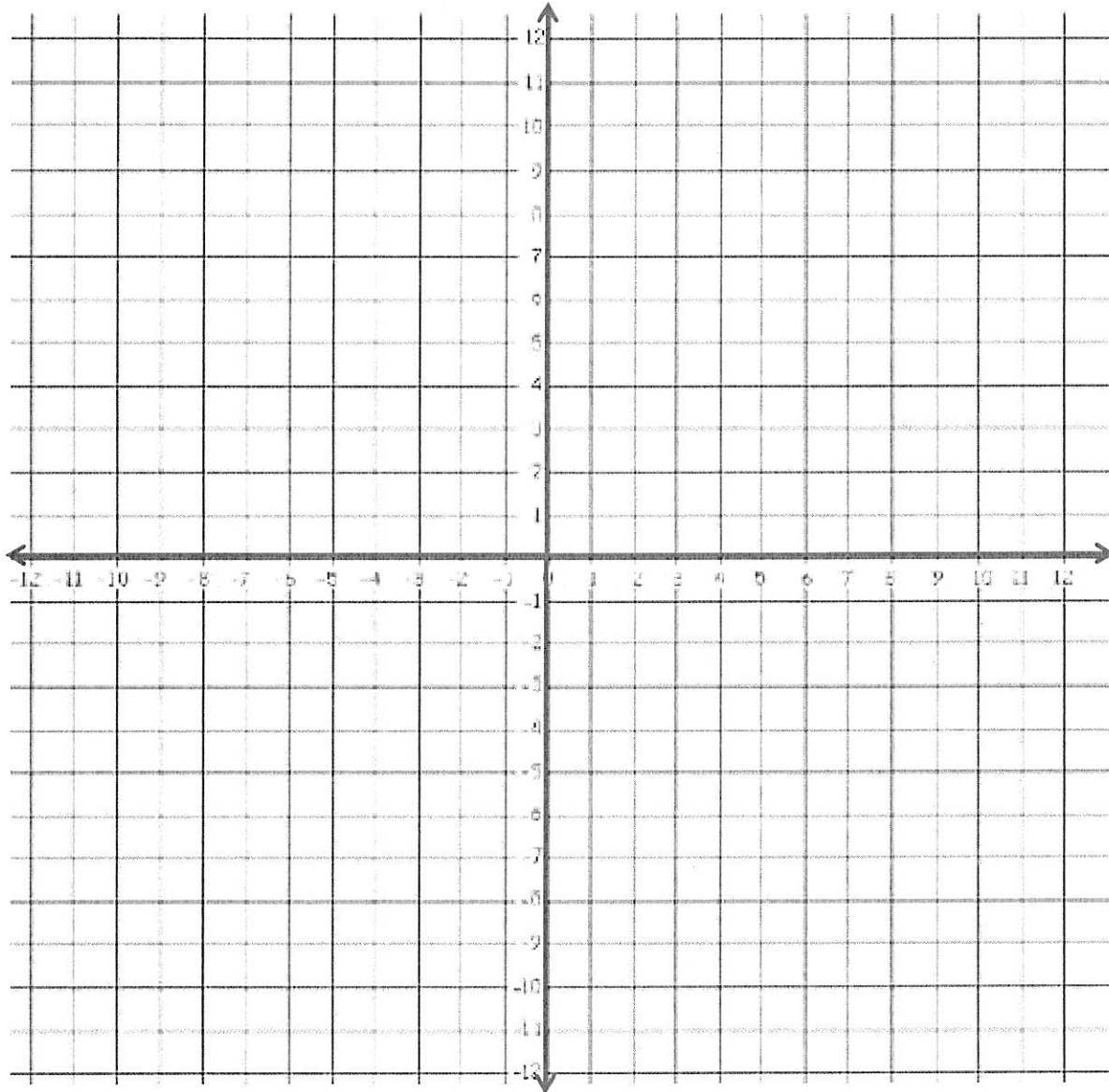
Main Campus

due date: Wednesday, March 30, 2016  
for an Extra Credit Project grade

Name:

### Playground Construction

Plans are being made for a school playground. The plans will be laid out on the coordinate grid below. The  $x$  and  $y$  axes represent footpaths through the playground. Each unit on the grid represents one foot.



- The jungle gym will be constructed in a space with the vertices  $(-12, -3)$ ,  $(-2, -3)$ ,  $(-2, -8.5)$ , and  $(-12, -8.5)$ .
- The swing set will be constructed in a space with the vertices  $(3.5, -2)$ ,  $(9, -2)$ ,  $(9, -11)$ , and  $(3.5, -11)$ .
- A merry-go-round will be constructed in a space with the vertices  $(-1, 4)$ ,  $(-6, 9)$ ,  $(-6, 4)$ , and  $(-1, 9)$ .

1. Plot the points for the three pieces of playground equipment on the coordinate grid and label each area.
  
2. A line will be painted around the space for each piece of equipment to create a border. Determine the distance, in feet, of the line for the border of each piece of equipment.
  
3. Each piece of equipment will have rubber mats covering the ground beneath it. From the coordinates you plotted, determine the each area, in square feet, that needs to be covered with the rubber mats.
  
4. Seesaws will be constructed directly across the x-axis footpath from the swing set, and the space for them will cover exactly the same area as the swing set.
  - a.) What are the coordinates for the vertices of the space for the seesaws?
  
  - b.) Plot and label the space for the seesaws on the grid.
  
  - c.) How far away, in feet, is the bottom side of the seesaw area from the top side of the swing set area?

## Car Wash Comparison

There are three car washes that have opened recently in Bowie. The table below shows how many cars they have washed since they opened for business.

<b>Sterling Wheels</b>	255 cars and 140 trucks in 5 weeks
<b>Ace Pro Wash</b>	192 cars and 104 trucks in 4 weeks
<b>Pristine Car Wash</b>	168 cars and 78 trucks in 3 weeks

5. How many vehicles, on average, does each business wash in a week?
  
6.
  - a.) Based on the data, which car wash cleans the most cars each week?
  
  - b.) Based on the data, which car wash cleans the most trucks each week?
  
7. If you use the above data to make a prediction, how many more vehicles will be washed at Pristine Car Wash than at Ace Pro Wash in 12 weeks?

8. Consider the following expression:

$$8x - \frac{1}{2}x + 4x^2$$

Evaluate the expression for the following values:

a.)  $x = \frac{1}{2}$

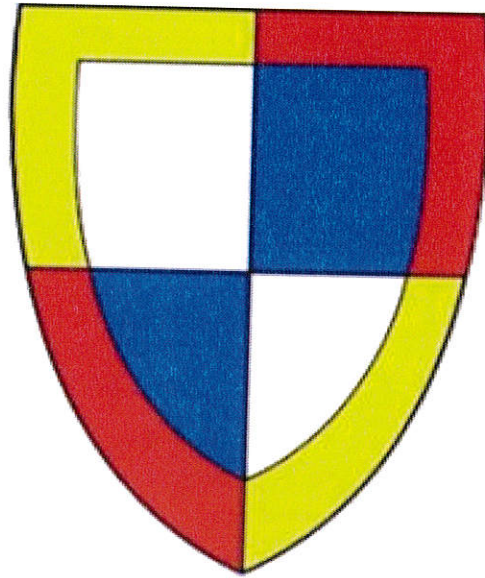
b.)  $x = 2.5$

c.)  $x = 6$

### A Growing Elm Tree

A family planted the seed of an elm tree in their backyard and they are tracking the growth of the tree. At the end of the first month, the elm seedling had grown three inches. The tree continued to grow three inches each month after that. Complete the chart below to track the growth of the tree:

<b>Month</b>	0	1	2	3	4	5	6
<b>Height</b>							



## BridgePrep Academy of Village Green

A Bilingual Academy for Learning  
"Where learning is a Journey"

# 6<sup>th</sup> Grade

## Science Spring Break Packet

---

Student Name: \_\_\_\_\_

Main Campus

due date: Wednesday, March 30, 2016  
for an Extra Credit Project grade

# Grade 6 Science



## SPRING BREAK PACKET

Student's Name	
Mr. Varani's class	

**March 21, 2016 – Due March 28, 2016**

**Student Edition**

## Note to Student and Parents

This homework packet for Spring Break has been created to provide practice for students to work through Selected Response (SR) and Brief Constructed Response (BCR) items related to previously learned skills and processes, physical science, and earth/space science concepts. Students are encouraged to return a completed packet to their science teacher when they return from spring break.

The Spring Break Packet contains a technical passage, SR and BCR items, graphs, charts, and a scoring rubric for BCRs.

Grading Scale	
Overall Score	Grade
24 - 20	A
19 - 16	B
15 - 13	C
12 - 10	D
9 - 0	E

***\*Each Selected Response (SR) question is worth 1 point. The Brief Constructed Response (BCR) questions (numbers 3, 5, 11, 13, 14) are worth a maximum of 3 points each.***

***Approximate time: The allocated amount of time required to complete this Spring Break Packet is 90 minutes.***

Please ensure that the completed packet is placed in your backpack and ready to be turned in by March 28, 2016

Parent's Name	
Parent's Signature	



## ***Skills and Processes***

Use the information below to answer Number 1.

Ms. Castillo wanted to know if she gave peppermints to her students before the test if it would increase their test scores. She gave all the students peppermints before Test A and gave them water before Test B. Ms. Castillo analyzes the data from both tests and saw that the scores were higher in Test B.

**1. What conclusions can be drawn about the results from Ms. Castillo's investigation?**

- A. The students should drink water before the test.
- B. The students should drink water with a peppermint before the test.
- C. The investigation yielded unreliable results because it had more than one independent variable.
- D. The investigation yielded reliable results because it had an independent and dependent variables.

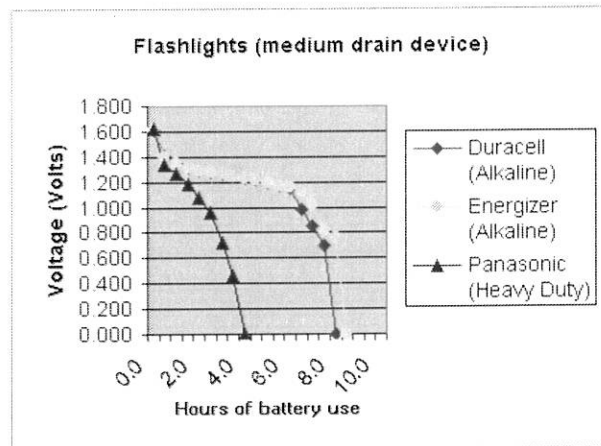
**2. You have run several trials in your experiment and gathered data from each trial.**

**What will help you organize all the information from your experiment?**

- A. develop a hypothesis
- B. create a table or a graph
- C. run some more trials
- D. draw your conclusion

Use the information below to answer Number 3.

Juan did a science fair project that tests which brand of batteries lasted the longest in a flashlight.



Juan concluded that his hypothesis was supported because the Panasonic battery had the most hours of use. Because the battery was heavy duty, it lasted the longest.

3. Does the data support Juan's conclusion? In your response be sure to include:

- evidence that supports your thinking
- reasons as to why Juan may have come to this conclusion

Write your answer in the space provided.


Use the technical passage below to answer Numbers 4 and 5 on pages 5 and 6.

### Drilling to the Mantle

In early 2005, scientists working in the Integrated Ocean Drilling Program (IODP) drilled the third deepest hole ever made in the ocean floor. They were attempting to reach the mantle of Earth. They drilled under water instead of on land because ocean plates are much thinner than continental plates – 5 kilometers thick as opposed to 30 kilometers thick.

The IODP drilling occurred at the Atlantis Massif, a large dome-shaped area in the North Atlantic Ocean that is about 16 kilometers wide. In this area, the crust is very thin and the ocean is shallow, making the project easier. Seismic data were used to choose the location of the thinnest crust. This area is characterized by metamorphic rock deposits. Unfortunately, scientists think the drilling occurred about 305 meters from the correct location. Although rock was recovered from up to 1,416 meters below the sea floor, the mantle was not reached. There were still useful results, however. One scientist said that the rock collected was from some of the deepest sections of the crust ever reached. These rocks will give geologists a chance to learn more about how the crust was formed.

Rocks brought to the surface from deep in the crust of Earth help geologists better understand the structure of the planet and how it formed. Early ideas about the evolution of Earth are being revised because of these new rock samples.

Scientists know that mantle material is very different from crust material. For example, mantle rock has a different texture and composition than crust material. The amount of minerals in the crust also is different from the amount of minerals in the mantle.

**4. The scientists working at the Integrated Ocean Drilling Program are most likely**

- A. researching the structure of the planet.
- B. looking for more information about ocean webs.
- C. investigating how fish live in the depths of the ocean.
- D. trying to understand how the ocean influences weather.

5. The Integrated Ocean Drilling Program scientists hypothesized that drilling at the Atlantis Massif would allow scientists to collect rocks from the mantle of Earth.

Explain why scientists make a hypothesis. In your explanation, be sure to include:

- the importance of a hypothesis
- what might be learned from an incorrect hypothesis
- supporting evidence from this investigation

Write your answer in the space provided.


## Physical Science

6. Look at the circuit below. What type of circuit is being shown?



- A. This is not a circuit.
  - B. This is an incomplete circuit.
  - C. This is a parallel circuit.
  - D. This is a series circuit.
7. Which of the following cycles depends on the fact that water is able to exist as a solid, a liquid, and a gas on Earth?
- A. The nitrogen cycle
  - B. The water cycle
  - C. The carbon cycle
  - D. The phosphorus cycle

8. Look at the diagram below. Will this circuit allow electricity to flow?

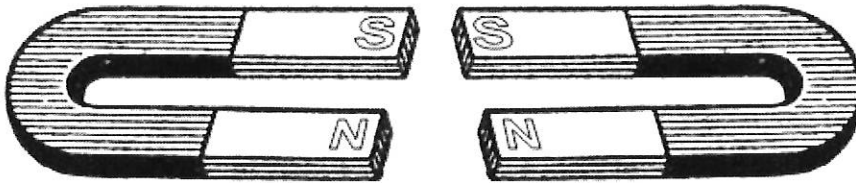


- A. No, the battery in the circuit above is not charged.
- B. Yes, the light bulb will get energy from the battery.
- C. Yes, the wire connected to the light bulb is electrically charged.
- D. No, electricity will flow only in complete loops of wires.

9. When two substances react to form a new material with different properties, a \_\_\_\_\_ change has occurred.

- A. typical
- B. natural
- C. chemical
- D. physical

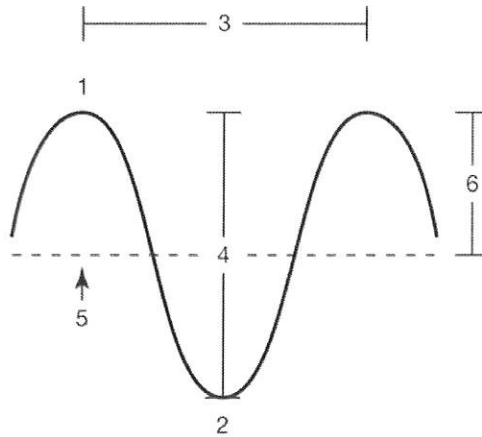
10.



In the picture above, what will most likely happen?

- A. Nothing will happen.
- B. The magnets will break.
- C. The magnets will attract each other.
- D. The magnets will repel each other.

11. A group of students investigated the properties of vibration waves.



Describe the characteristics that are common to all vibration waves. In your description, be sure to include:

- the identity of each numbered area in the diagram
- how a change in frequency would affect the relationship between numbered areas 1 and 3

Write your answer in the space provided.


## ***Earth & Space Science***

Use the technical passage below to answer Numbers 12 and 13 on pages 10 and 11.

Iceland Volcano Eruption of 2010 (Eyjafjallajokull volcano)  
(pronounced [ˈeːijaˌfjatlaˌjœːkʏtl];  
Icelandic for "Island mountain glacier")  
NY Times Newspaper 4/20/2010

The Eyjafjallajokull volcano, one of Iceland's largest, had been dormant for nearly two centuries before returning gently to life in the late evening of March 20, 2010, noticeable at first not by any great seismic activity but by the emergence of a red cloud glowing above the vast glacier that covers it.

In the following days, fire fountains jetted from a dozen vents on the volcano, reaching as high as 100 meters, according to the Institute of Earth Sciences at the University of Iceland. That spectacular show, along with lava flows up to 20 meters thick, and "lava falls" to the volcano's northeast, turned it into a full-fledged tourist attraction.

**12. The Eyjafjallajokull volcano is most likely located**

- A. in seafloor spreading.
- B. near the asthenosphere.
- C. in the southern hemisphere.
- D. along tectonic plate boundaries.



13. Describe the type of rock that would be formed from the Eyjafjallajokull volcano that erupted in Iceland.

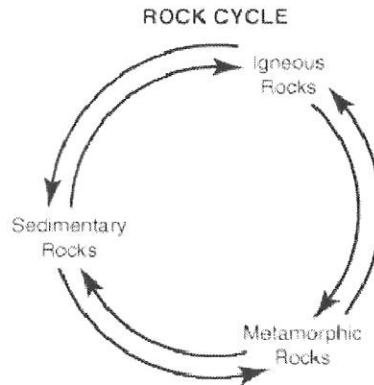
In your description be sure to include:

- a description of the rock
- how the rock is formed

Write your answer in the space provided.


14. The rock cycle is a process that alters sedimentary, metamorphic, and igneous rocks. The diagram below shows the rock cycle.

Igneous, metamorphic, and sedimentary rock are all part of the rock cycle.



Explain how metamorphic rocks are part of the rock cycle. In your explanation, be sure to include:

- the features that make each rock type different
- the processes that result in the formation of each rock type

Write your answer on your answer document.


# **MSA SCIENCE RBRIC**

## **LEVEL 3**

**There is evidence in this response that the student has a *full and complete understanding* of the question or problem.**

- The supporting scientific evidence is complete and demonstrates a full integration of scientific concepts, principles, and/or skills.
- The response reflects a complete synthesis of information, such as data, cause-effect relationships, or other collected evidence.
- The accurate use of scientific terminology strengthens the response.
- An effective application of the concept to a practical problem or real-world situation reveals a complete understanding of the scientific principles. \*

## **LEVEL 2**

**There is evidence in this response that the student has a *general understanding* of the question or problem.**

- The supporting scientific evidence is generally complete with some integration of scientific concepts, principles, and/or skills.
- The response reflects some synthesis of information, such as data, cause-effect relationships, or other collected evidence.
- The accurate use of scientific terminology is present in the response.
- An application of the concept to a practical problem or real-world situation reveals a general understanding of the scientific principles. \*

## **LEVEL 1**

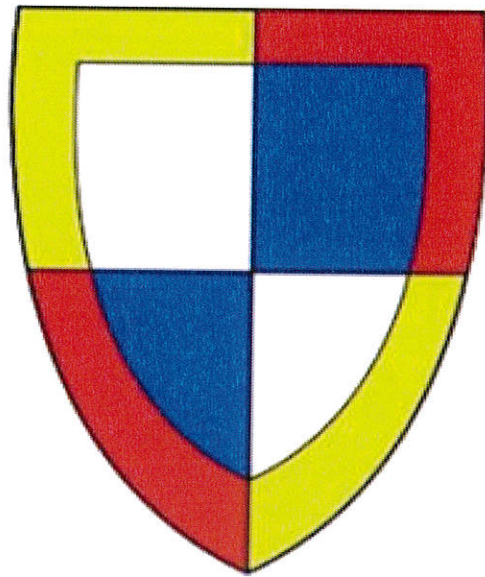
**There is evidence in this response that the student has *minimal understanding* of the question or problem.**

- The supporting scientific evidence is minimal.
- The response provides little or no synthesis of information, such as data, cause-effect relationships, or other collected evidence.
- The accurate use of scientific terminology may not be present in the response.
- An application, if attempted, is minimal. \*

## **LEVEL 0**

**There is evidence that the student has *no understanding* of the question or problem.**

- The response is completely incorrect or irrelevant or there is no response.
-



## BridgePrep Academy of Village Green

A Bilingual Academy for Learning  
"Where learning is a Journey"

# 6<sup>th</sup> Grade

## Social Studies Spring Break Packet

---

Student Name: \_\_\_\_\_

Main Campus

due date: Wednesday, March 30, 2016  
for an Extra Credit Project grade

## 25 Multiple choice questions

1. They had a stable food supply.
  - a. What was the greatest benefit to people when early farmers began to raise plants and animals?
  - b. Who wrote about the Persian Wars?
  - c. What were communities like during the Neolithic Age?
  - d. What was the way of life based on in the Neolithic Age?

2. of or relating to or characteristic of ancient Mycenae or its inhabitants
  - a. plebeian
  - b. India
  - c. Mycenaean
  - d. China
  
3. an ancient Greek city located in the western part of what is now modern Turkey during the Hellenistic Era
  - a. Pergamum
  - b. Rome
  - c. trade
  - d. Peninsula
  
4. \_\_\_\_\_ provided the basis for the law codes of Western Europe.
  - a. India
  - b. Justinian
  - c. Stoicism
  - d. eastern
  
5. system in which one set of goods or services is exchanged/traded for another
  - a. Technology
  - b. Athens
  - c. panopoly
  - d. Barter Economy
  
6. a period of classical Athenian and Greek history in which Athens reached its highest power
  - a. Sophocles
  - b. Hieroglyphics
  - c. Age of Pericles
  - d. Spices
  
7. a type of paper made in Egypt from the papyrus plant by cutting it in strips and pressing it flat
  - a. Arabic
  - b. Phalanx
  - c. pilgrim
  - d. Papyrus

8. The most famous of greek oracles

- a. Oracle
- b. Barter Economy
- c. The plague in Greece
- d. Oracle of Apollo at Delphi

9. Communities worked together and divided up the work. People organized themselves more efficiently.

- a. what is the mandate of heaven?
- b. What were the jobs of the Neolithic Age?
- c. What was the way of life based on in the Paleolithic Age?
- d. What were communities like during the Neolithic Age?

10. an organized system of thought

- a. Aristotle
- b. Insulae
- c. Dynasty
- d. Philosophy

11. Political unity and the \_\_\_\_\_ language facilitated trade and stimulated intellectual activity.

- a. republic
- b. Martyrs
- c. race
- d. Arabic

12. the process of absorbing one cultural group into another

- a. Irrigation
- b. Civilization
- c. Assimilation
- d. imperator

13. The \_\_\_\_\_ are alms to the poor, pilgrimage to Mecca, pray 5 times a day, fast during the holy month of Ramadan, and saying the declaration of faith

- a. The plague in Greece
- b. five pillars of faith
- c. lateen sail
- d. Fertile Crescent

14. Constantinople was easily fortified because it was located on a \_\_\_\_\_.
- a. China
  - b. plague
  - c. Peninsula
  - d. kings
15. Walled in Athens, agreed the 30 year peace with Sparta
- a. Age of Pericles
  - b. What was Aegospotami?
  - c. What did Pericles do?
  - d. Fertile Crescent
16. the largest Greek island in the Mediterranean
- a. China
  - b. trade
  - c. Rome
  - d. Crete
17. The Islamic civilization preserved and extended Greek, Persian, and Indian learning translating texts into \_\_\_\_\_.
- a. Islamic
  - b. Trade
  - c. Arabic
  - d. arid
18. The Islamic capital of \_\_\_\_\_ eventually fell to the Mongols.
- a. Asoka
  - b. Baghdad
  - c. Eastern
  - d. Trade
19. an ancient form of Egyptian writing in which pictures were used to represent ideas and sounds
- a. Polis
  - b. Acropolis
  - c. Hieroglyphics
  - d. Philosophy



20. The \_\_\_\_\_ reached its height in culture and prosperity under Justinian's rule.
- a. Textiles
  - b. Justinian
  - c. Byzantine Empire
  - d. rain forests
21. The Aztec economy was based on \_\_\_\_\_ and tribute from conquered peoples.
- a. Aristotle
  - b. Acropolis
  - c. agriculture
  - d. patrician
22. a city in the Holy Land, regarded as sacred by Christians, Muslims, and Jews
- a. Pergamum
  - b. Exile
  - c. trade
  - d. Jerusalem
23. The \_\_\_\_\_ church was centered in Constantinople, used the Greek language in the liturgy, and accepted the authority of the Patriarch.
- a. Exile
  - b. Athens
  - c. Moses
  - d. eastern
24. The Mayans and Aztecs built pyramids and practiced human sacrifice for their \_\_\_\_\_ religion.
- a. Catholic
  - b. Polytheism
  - c. polytheistic
  - d. Pythagoras
25. Printing and paper money came from \_\_\_\_\_.
- a. Exile
  - b. China
  - c. Islam
  - d. Archons