



PACKET II (10TH)

“making progress is a journey”

8300 Bissonnet Suite 218

Computer/Learning Lab open Mon – Fri 4pm – 7pm

M.P.J. ACADEMY OF EXCELLENCE

admin@mpj-academy.org

Communication Applications – Packet II

(Speech)

Directions: Each student is required to present a 3 to 5 minute speech on the subject of his/her choice to instructor. It must be typed using a font size of 12. Normally 2 full pages of typed, single spacing will be 3-5 minutes. Some suggested topics are listed below but you **are not** limited to these subjects.

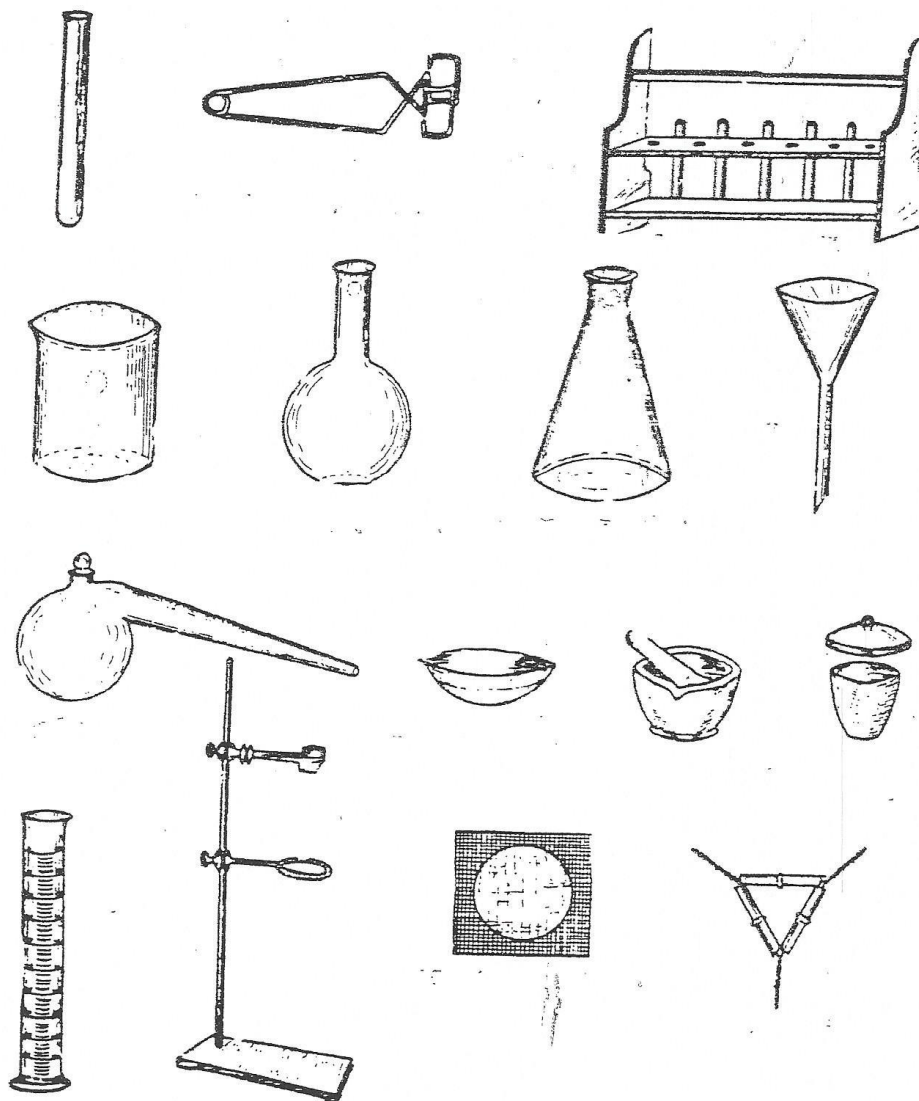
- Climate Change, Global Warming, Disaster Management
- Nature, Deforestation, Air Pollution
- Why we should get rid of daylight savings time
- Should there be more restrictions on plastic surgery
- The complications of using a surrogate to have a baby
- How people or organizations are still getting away with discrimination
- The impact of luck on an individual's success
- The value of a good impression
- Electric cars should be more affordable
- The correlation between lower income communities and fast food restaurants
- Can you make money blogging (how to become a blogger)

REMEMBER!!!! YOU ARE NOT LIMITED TO THESE TOPICS. THE SPEECH CAN BE ABOUT ANYTHING YOU CHOOSE. WE ARE HERE TO LISTEN.

Chemistry Lab Safety

1. Read labels on containers and never use a chemical if the bottle is not labeled.
 - a. True
 - b. False
2. You should always hold containers near your face so you can see how you are pouring them.
 - a. True
 - b. False
3. Loose clothing should be worn at all times to prevent chemical spills from landing on skin.
 - a. True
 - b. False
4. Point test tubes away from yourself and others.
 - a. True
 - b. False
 - c.
5. When testing for odors, hold the chemical about an arm's length away and wave your hand over it, cautiously sniffing from a distance.
 - a. True
 - b. False
6. When diluting a concentrated acid with water, add the water to the acid not the acid to the water. This prevents sudden over heating of the water.
 - a. True
 - b. False
7. When gathering glassware and equipment for a lab, you should:
 - a. Read all the directions carefully
 - b. Look for cracks and chips
 - c. Clean dirty glassware
 - d. All of the above
8. Chemicals should be stored
 - a. according to their reactivity with other substances
 - b. by alphabetical order
 - c. in an off-site research facility
 - d. in a dark room
9. When working with in the laboratory, the abbreviation, STP, refers to
 - a. an additive for oil and other lubricants.
 - b. starting time and position.
 - c. standard temperature and pressure.
 - d. standard testing protocol.
10. If you get a chemical in your eye, you should
 - a. Blink very fast
 - b. Flush your eyes in the eye wash for 15-20 minutes
 - c. Hold your eyes tightly shut
 - d. Rub your eyes to stimulate tearing

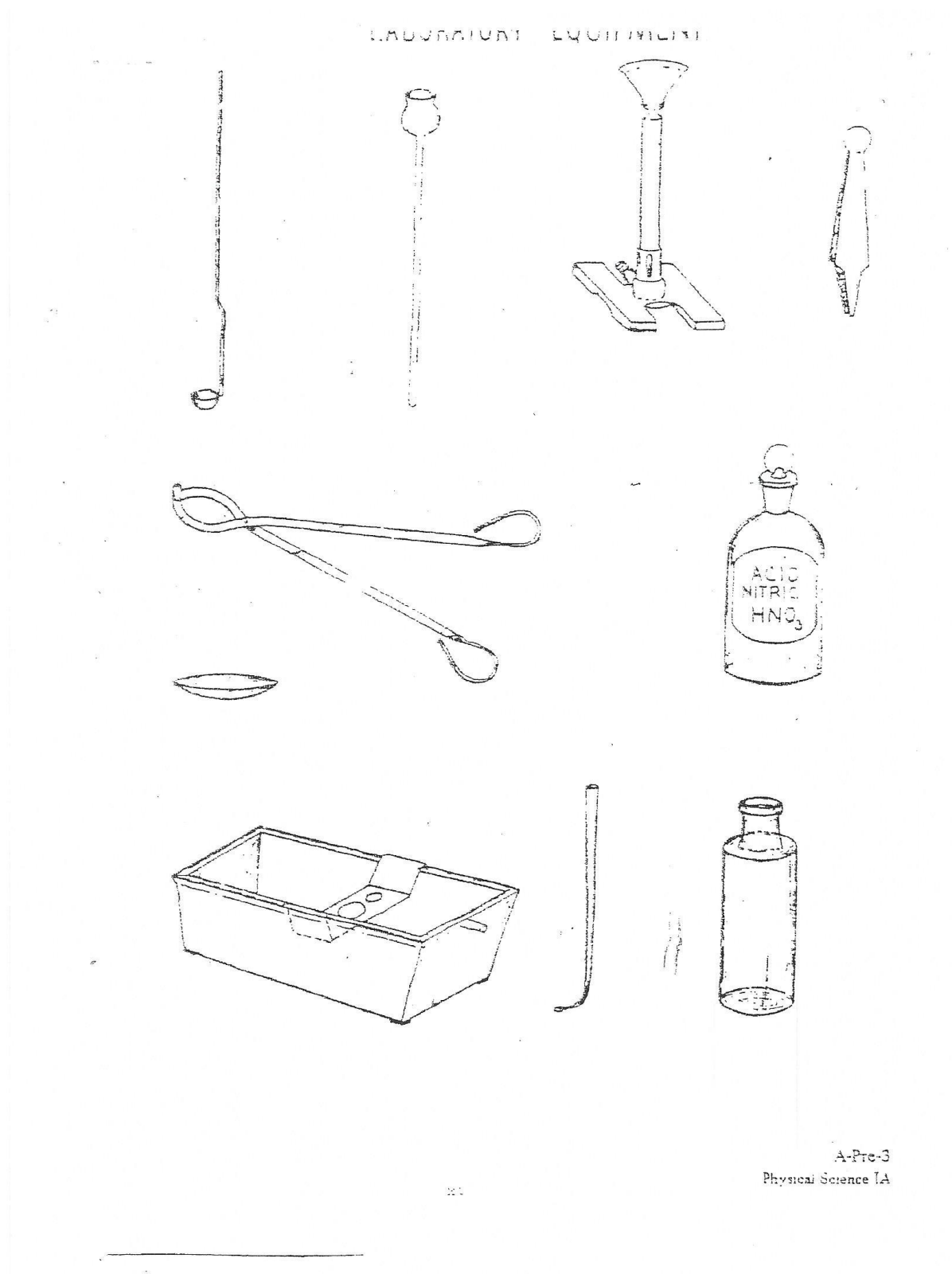
LABORATORY EQUIPMENT



A-Pre-2

Physical Science 1A

x



The Periodic Table of the Elements

1	H	Hydrogen	1.00794
2	He	Helium	4.003
3	Li	Lithium	6.941
4	Be	Beryllium	9.012182
5	B	Boron	10.811
6	C	Carbon	12.0107
7	N	Nitrogen	14.00674
8	O	Oxygen	15.9994
9	F	Fluorine	18.9984032
10	Ne	Neon	20.1797
11	Na	Sodium	22.989770
12	Mg	Magnesium	24.304
13	Al	Aluminum	26.981538
14	Si	Silicon	28.0855
15	P	Phosphorus	30.973761
16	S	Sulfur	32.066
17	Cl	Chlorine	35.4527
18	Ar	Argon	39.948
19	K	Potassium	39.0983
20	Ca	Calcium	40.078
21	Sc	Scandium	44.955910
22	Ti	Titanium	47.887
23	V	Vanadium	50.9415
24	Cr	Chromium	51.9961
25	Mn	Manganese	54.938045
26	Fe	Iron	55.845
27	Co	Cobalt	58.933200
28	Ni	Nickel	58.6934
29	Cu	Copper	63.546
30	Zn	Zinc	65.38
31	Ga	Gallium	69.723
32	Ge	Germanium	72.64
33	As	Arsenic	74.92160
34	Se	Selenium	78.96
35	Br	Bromine	79.904
36	Kr	Krypton	83.80
37	Rb	Rubidium	85.4678
38	Sr	Strontium	87.62
39	Y	Yttrium	88.90585
40	Zr	Zirconium	91.224
41	Nb	Niobium	92.90638
42	Mo	Molybdenum	95.94
43	Tc	Technetium	(98)
44	Ru	Ruthenium	101.07
45	Rh	Rhodium	102.90550
46	Pd	Palladium	106.92
47	Ag	Silver	107.8682
48	Cd	Cadmium	112.411
49	In	Indium	114.818
50	Sn	Tin	118.710
51	Sb	Antimony	121.760
52	Te	Tellurium	127.60
53	I	Iodine	126.90447
54	Xe	Xenon	131.29
55	Cs	Cesium	132.90545
56	Ba	Barium	137.327
57	La	Lanthanum	138.9055
58	Ce	Cerium	140.12
59	Pr	Praseodymium	140.90768
60	Nd	Neodymium	144.24
61	Pm	Promethium	(145)
62	Sm	Samarium	150.36
63	Eu	Euroium	151.964
64	Gd	Gadolinium	157.25
65	Tb	Terbium	158.92534
66	Dy	Dysprosium	162.50
67	Ho	Holmium	164.93033
68	Er	Erbium	167.26
69	Tm	Thulium	168.93421
70	Yb	Ytterbium	173.054
71	Lu	Lutetium	174.967
72	Hf	Hafnium	178.49
73	Ta	Tantalum	180.9479
74	W	Tungsten	183.84
75	Re	Rhenium	186.207
76	Os	Osmium	190.23
77	Ir	Iridium	192.22
78	Pt	Platinum	195.078
79	Au	Gold	196.96655
80	Hg	Mercury	200.59
81	Tl	Thallium	204.3833
82	Pb	Lead	207.2
83	Bi	Bismuth	208.9804
84	Po	Polonium	(209)
85	At	Astatine	(210)
86	Rn	Radon	(222)
87	Fr	Francium	(223)
88	Ra	Radium	(226)
89	Ac	Actinium	(227)
90	Th	Thorium	(232)
91	Pa	Protactinium	(231)
92	U	Uranium	238.0289
93	Np	Neptunium	(237)
94	Pu	Plutonium	(244)
95	Am	Americium	(243)
96	Cm	Curium	(247)
97	Bk	Berkelium	(247)
98	Cf	Californium	(251)
99	Es	Einsteinium	(252)
100	Fm	Fermium	(257)
101	Md	Mendelevium	(258)
102	No	Nobelium	(259)
103	Lr	Lanthanum	(262)

Part I

BASIC CHEMISTRY

Name _____

Directions: Write the chemical symbol for each of the following elements.

1. Ca _____
2. N _____
3. Cl _____
4. S _____
5. Xe _____
6. Ga _____
7. Ru _____
8. U _____
9. Fe _____
10. B _____
11. Si _____
12. Br _____
13. Ba _____
14. Na _____
15. Ar _____
16. F _____
17. O _____
18. Al _____
19. P _____
20. Hg _____

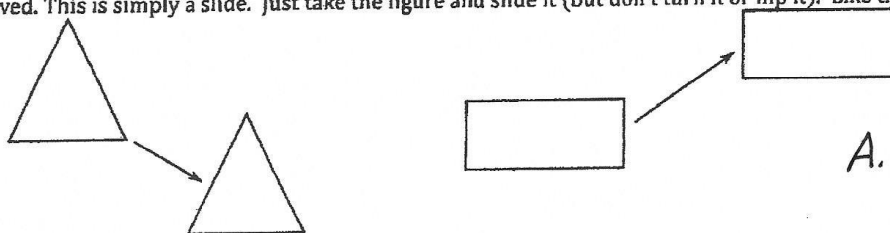
Geometry

More than meets the eye...

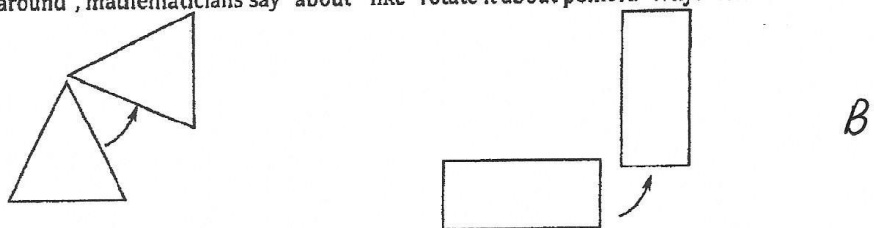
Well no, we can't turn a geometric figure into a walking, talking robot, but we can move it around a little. (Maybe if you pass geometry and become an engineer you can make something slightly more exciting.)

In all the transformations except one, the figure stays exactly the same size and shape. With a dilation the shape is maintained, but the size is changed. Let's look at an example of each.

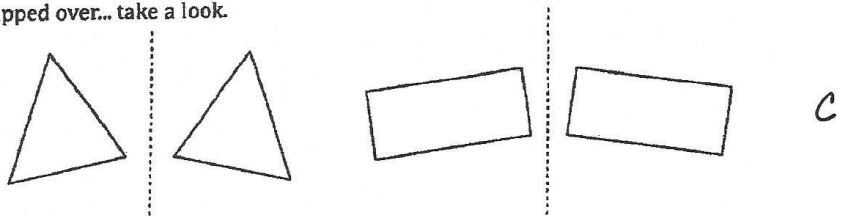
Translation: A transformation in which the figure maintains its shape and orientation, but is moved. This is simply a slide. Just take the figure and slide it (but don't turn it or flip it). Like this...



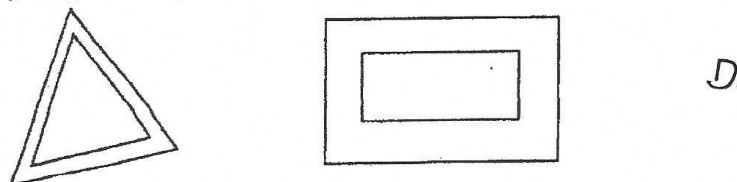
Rotation: This is simply a turn. You can turn it on its middle or around a point. Instead of saying "around", mathematicians say "about" like "rotate it about point A." Why? Who cares... here it is.

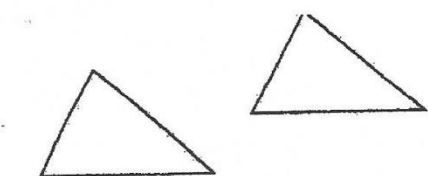


Reflection: A reflection is a mirror image...like...your reflection. You can also think of it as being flipped over... take a look.

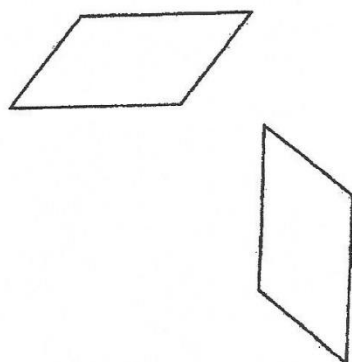


Dilation: This is the one where the shape changes size, but still does not change shape. In fact that is the only thing that changes. To dilate means to "get bigger".

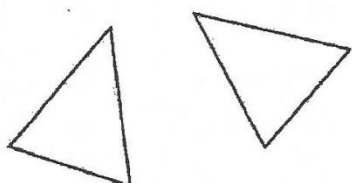




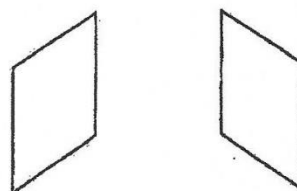
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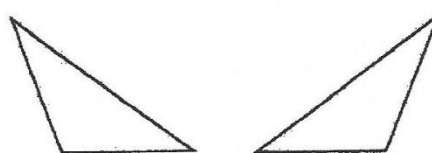
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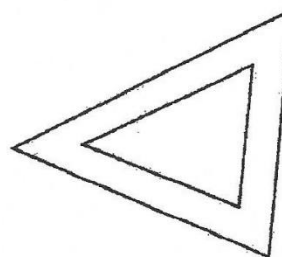
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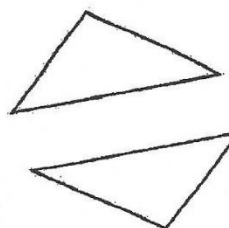
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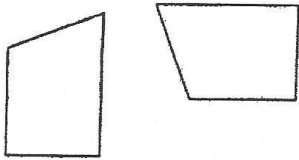


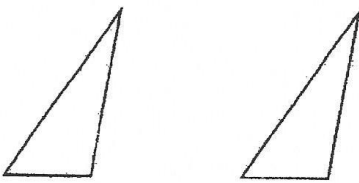
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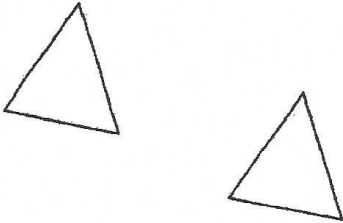


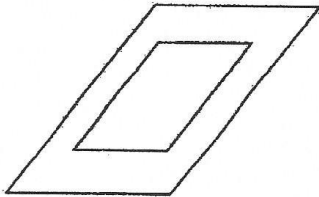
Bubble the correct answer choice from each item above.

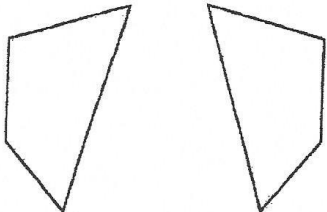
#1.	#2.	#3.	#4.	#5.	#6.	#7.	#8.
<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.
<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.
<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.
<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.

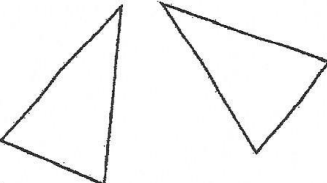
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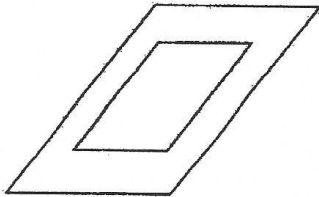
12. 

13. 

14. 

15. 

16. 

12. 

Bubble the correct answer choice from each item above.

#9	#10	#11	#12	#13	#14	#15	#16
<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.	<input type="radio"/> A.
<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.	<input type="radio"/> B.
<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.	<input type="radio"/> C.
<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.	<input type="radio"/> D.

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Name(s) _____

Directions: Read each passage and find the main idea. Write the main idea on the lines as indicated below.

Passage 1

Tailgating is not only annoying, it is also extremely dangerous. One solution could be for automakers to invent a device to install on cars that lets out an earsplitting alarm when a driver gets too close to another car.

Main idea _____

Passage 2

Dog-owners: Have you walked your dog today? A daily walk is as important as giving your dog food, water, and shelter. Walking your dog not only results in a happier, healthier pooch, it can also help you lose weight and get in shape. And best of all, a daily walk will give you a chance to spend time with your "best friend," therefore making the bond between the two of you even stronger.

Main idea _____

Passage 3

Janelle opened the front door of her studio apartment and banged it into the kitchen stove, as she had done almost every day since moving in. The "kitchen" itself was no more than the stove, a one-basin sink, and an ancient, avocado-colored refrigerator squeezed against one wall. Across from the kitchen, a plaid couch and floral armchair struggled for space along with a coffee table missing one leg and propped up by a stack of books. To Janelle, her first apartment was absolutely perfect.

Main idea _____

Passage 4

Flowers in your garden can be divided into two broad categories: perennials and annuals. Perennials are flowers that survive from one year to the next. You plant them once and can expect to see them come back year after year. Annuals, on the other hand only live for one year and must be replanted each spring. There are other differences as well. Perennials generally bloom for a short period of time in the summer. However, annuals often bloom continuously throughout the summer, in a spectacular display of color.

Main idea _____

Name: _____

Date: _____

Keyboarding

Website: <https://play.typeracer.com>

or *Typix.com*

Directions: Go to the above listed Website and follow the directions given. Start typing the given passages. Your typing speed must be 35/wpm.

When you have reached the correct typing speed, print out the score and turn the print-out in to Ms. Prevot.

Las Mascotas

Match each pet in Spanish to its English translation, then find the Spanish words in the puzzle.

_____ el cachorro

_____ el hámster

_____ el loro

_____ el conejo

_____ la cobaya

_____ el ratón

_____ el gatito

_____ la rana

_____ el gerbo

_____ la serpiente

_____ el perico

_____ el perro

_____ el pez

_____ el gato

A. parrot

B. puppy

C. guinea pig

D. kitten

E. frog

F. parakeet

G. hamster

H. snake

I. mouse

J. cat

K. dog

L. rabbit

M. fish

N. gerbil



After you have found all 14 Spanish words above in the puzzle, there are 10 letters left. Write the first 9 in order, from top to bottom and left to right, on the blanks below to answer the question.



Q: What animal is sometimes kept as an unusual pet? The few brave people who own this creature keep it in a glass cage, but it is not a snake or turtle.

A:

Es el _____



PrintableSpanish.com

Grammar: Grades 4–5 Activity 145: Use Commas Correctly/Activity 146: Use Commas and Periods in Context

ACTIVITY 145 Use Commas Correctly

Name: _____

Date: _____

- Use commas to separate three or more words in a list. (oats, peas, beans, and barley)
 - Use a comma after the greeting in a friendly letter. (Dear Herman,)
 - Use a comma after the closing of a letter. (Yours truly,)
 - Use a comma between the name of a city and state. (Hartford, Connecticut)
 - Use a comma between the name of a city and country. (Tokyo, Japan)
 - Use a comma to separate the day, date, and month from the year. (Monday, July 4, 1776)
- Note:** no comma is used if only the month and year is given. (May 1776)

1. Write the day, month, date, and year you were born. _____

2. Write today's day, month, date, and year. _____
3. Complete the sentence by listing six nouns you can see right now. Use commas.
I see _____
_____ and _____.
4. In what city and state do you live? _____
5. What city and country would you like to visit? _____

ACTIVITY 146 Use Commas and Periods in Context/Write a Letter

Name: _____

Date: _____

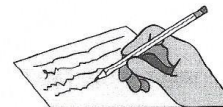
Write a short letter to an author about a book you like. Remember to use commas and periods in your letter.

(Today's date)

Dear _____

(Closing)

(Your name)



Name: _____

Date: _____

Nutrition - Vitamins & Minerals

1. Vitamins are considered non-organic nutrients.
 - a. True
 - b. False
2. Vitamin C deficiency in children causes rickets, a disease in which the bones are weak and deformed.
 - a. True
 - b. False
3. What is the chemical substance obtained from food and used in the body to provide energy, structural material, and regulating agents to support growth, maintenance, and repair of the body's tissues?
 - a. food
 - b. vitamin
 - c. nutrient
 - d. mineral
4. Which vitamin helps in the production of red blood cells and supplies oxygen to cells?
 - a. iron
 - b. protein
 - c. copper
 - d. calcium
5. What are the best sources of calcium in the American Diet?
 - a. ice cream & cake
 - b. apples & oranges
 - c. milk & dairy products
 - d. bread & pasta
6. Which micro-nutrient is not manufactured by living things?
 - a. Vitamins
 - b. Carbohydrates
 - c. Minerals
 - d. Fats

7. Select the nutrient that best applies to the description. This nutrient helps regulate chemical reactions within the body. There are two types of this nutrient, macro and trace. What is the nutrient?

- a. Minerals
- b. Vitamins
- c. Water
- d. Fats

You can find
the Test Mak
on

8. Which of the following has the highest sodium content?

- a. Fresh fruits and vegetables.
- b. Lunchmeats, processed cheeses and canned soup.
- c. Mild, roast beef sandwich.
- d. Tossed salad with vinegar and oil dressing.

9. Name all the fat soluble vitamins:

_____ and _____

10. List the five functions of a vitamin:

- 1.
- 2.
- 3.
- 4.
- 5.

World History: Ancient Greece

1. ____ The Great conquered Egypt and the Persian Empire.
2. Socrates, Plato, and Aristotle were Greek ____.
3. The ____ is a temple of the Greek goddess Athena.
4. The first ____ Games were played in Greece since 776 B.C.
5. Cyrus, Darius and Xerxes were Persian ____.
6. Zeus, Poseidon and Hades were Greek ____.
7. Athens, Sparta, Marathon and Olympia were Greek ____.
8. Instead of being ruled by a king ____ was a democracy.

Word List

- | | | | |
|--------------|------------|----------------|-----------------|
| a. Alexander | b. Athens | c. City-states | d. Gods |
| e. Kings | f. Olympic | g. Parthenon | h. philosophers |
-

Use this 5-item pretest to test your knowledge in Math..

Select an answer for each item. If you do not know the answer, you should make an educated guess. After you submit the test, you will be given your results.

Value: 1

A group of 100 people, some students and some faculty, attended a museum opening. Each student paid \$10 per person for entrance to the museum and each of the faculty paid \$25 per person for entrance. If the total paid, for all 100 people, was \$1300, how many students attended the museum opening?

- ☐ a. 20
- ☐ b. 50
- ☐ c. 70
- ☐ d. 80

Value: 1

A farmer has 1235 trees to be planted on a rectangular parcel of land. If there are 24 trees planted in each row and each row must be complete before it is planted, how many trees will be left over after planting?

- ☐ a. 21
- ☐ b. 11
- ☐ c. 0
- ☐ d. 55

Value: 1

In the xy-plane, what is the y-intercept of the graph of the equation $y = \sqrt{4-x}$?

- ☐ a. 2
- ☐ b. 4
- ☐ c. 16
- ☐ d. There is no y-intercept.

Value: 1

$(3x^{-2}y^4)^{-3} =$

- ☐ a. $\frac{3y}{x^5}$
- ☐ b. $\frac{x^6}{27y^{12}}$
- ☐ c. $\frac{x^6}{9y^{12}}$
- ☐ d. $\frac{y}{27x^5}$

Value: 1

Which of the following equations has both 2 and -4 as solutions?

- ☐ a. $x^2 + 6x + 8 = 0$
- ☐ b. $x^2 - 2x - 8 = 0$
- ☐ c. $x^2 + 2x - 8 = 0$
- ☐ d. $x^2 - 2x + 8 = 0$

1. How was the Pony Express able to move letters across the country so quickly? Refer to the text in your answer.

2. How did the California Gold Rush help to create a need for the Pony Express? Use the text to support your response.

3. Why was the Pony Express no longer needed? Refer to the text in your answer.

Name: _____

Nonfiction Reading Test

The Pony Express

Directions: Read the following passage and answer the questions that follow. Refer to the text to check your answers when appropriate.

In this age of texts and tweets, it is easy to send messages. You just press a few buttons, and boom! Your message is sent. The person to whom you sent it will get it in just a few seconds. Distance is no longer an issue. But things weren't always so easy.

In 1848 gold was found in California. Thousands of people rushed there to get some. Many people liked living there and decided to stay. But there wasn't a whole lot between California and Missouri, where the nearest trains ran. The train line to California wasn't finished until 1869. It took a long time to ride a horse to Missouri.

Imagine that it is the year 1860. You have moved to California to open a shop. Most of your family stayed back East. Your shop is doing well and now you want to your family to join you. How do you get news to them? There's no phone, no train, and you can't leave your shop for too long. What do you do? Well, you could use the Pony Express.

In 1860 and 1861, the Pony Express was the fastest way to get news to and from the West. The trail that they rode was around 2000 miles long. It took most people weeks or months to ride that far. The Pony Express could make the trip in just ten days. Those speeds were unheard of at the time. So how did they do it? Well, they had a good system.



The Pony Express had 184 stations along the trail. The stations were around ten miles apart. This is about how far a horse could run at a gallop before tiring. The rider would switch to a new horse at each station. He would only take his mail pouch with him. Every 75-100 miles, the rider would get to a home station. At each home station, riders would rest. Before resting, he would give his mail pouch to a new rider. The mail never stopped moving, even while the horses and riders rested.

It was tough to ride for the Pony Express. Each rider had to weigh less than 125 pounds. Speed was the key. Most of the riders were teenage boys. They rode at a fast pace for up to 100 miles a day. If there were an emergency, one might have to ride 200 miles in a day. The ride could be rough and dangerous. Attacks by Native Americans were common. But in its time running, the Pony Express only lost one mail pouch.

The Pony Express filled an important role for a time, but it did not last. The Civil War started in April of 1861. This was bad news for the owners. The worst for them was yet to come. On October 24th, 1861, the first telegraph line to California was finished. This linked them to the rest of the country. People could send messages in an instant. Two days later the Pony Express closed. But the lore of the brave riders lives on even today.

1. Which happened first?
 - a. Settlers rushed to California to find gold.
 - b. The Pony Express was started.
 - c. The train line to California was finished.
 - d. The first telegraph line to California was finished.
2. Which best explains why Pony Express riders had to weigh less than 125 pounds?
 - a. Heavier men were more expensive.
 - b. Horses were scared of heavier men.
 - c. Heavier men scared customers.
 - d. Horses could move quicker with lighter men.
3. How fast could the Pony Express take a letter from California to Missouri?
 - a. 24 hours
 - b. ten days
 - c. twenty days
 - d. one month
4. Why were the Pony Express stations about ten miles apart?
 - a. This was about as far as a man could walk in a single day.
 - b. This was as far as a man could ride on a horse in a day.
 - c. This was so the riders wouldn't get so lonely at night.
 - d. This was as far as a horse could run without getting tired.
5. Which was probably **not** a requirement to be a rider for the Pony Express?
 - a. You had to be light.
 - b. You had to be an expert horse rider.
 - c. You had to be able to read and write.
 - d. You had to be brave in the face of danger.
6. Which best describes that main idea of the fifth paragraph?
 - a. It is about how many Pony Express stations there were.
 - b. It is about how the Pony Express carried mail so quickly.
 - c. It is about how the Pony Express riders slept in the stations.
 - d. It is about how far the Pony Express riders would go in a day.
7. Which of these ended the Pony Express?
 - a. The telegraph
 - b. The Civil War
 - c. Wars with Native Americans
 - d. The train line
8. About how far did Pony Express riders travel on a usual day?
 - a. 10 miles
 - b. 200 miles
 - c. 100 miles
 - d. 2000 miles
9. How many mail pouches did the Pony Express lose?
 - a. The Pony Express never lost a mail pouch.
 - b. One
 - c. Two
 - d. Too many to keep track
10. Which title best describes the author's purpose in writing this?
 - a. *Out of Touch: Why Phones are Faster Than Horses*
 - b. *The Pony Express: Stories of Their Bravery in Battle*
 - c. *Back in Touch: Why We Should Use Horses to Deliver the Mail*
 - d. *The Pony Express: About the 1860's Fastest Mail Service*