

## **Week 5: Packet Assignments**

### **1. Math**

□ Graphs

### **2. Science Articles & Questions**

# Gas Exchange

**Cross-Curricular Focus: Life Science**

Did you know that your body has its very own gas exchange program that runs 24 hours a day? It's called the **respiratory system**. It is one of your body's vital systems, which means you could not live without it. Every time you take a breath, oxygen enters your lungs and is carried around to all the body's cells by the circulatory system. Waste products, like carbon dioxide gas, are picked up by the circulatory system as well. Carbon dioxide is dropped off at the lungs so you can breathe it out.

The respiratory and circulatory systems need each other. The respiratory system brings in oxygen and pushes out carbon dioxide. The circulatory system transports these gases where they need to go. The two systems work together to make sure that your body gets what it needs to survive. That is why we say that the respiratory and circulatory systems are **interdependent**. They need each other.

The respiratory system is not just your lungs. It also includes your nose, mouth, and the air passageways that connect them to your lungs. After you inhale air through your nose and mouth, it enters a tube in your throat called the trachea. Right before the trachea gets to your lungs, it splits into two smaller tubes called the bronchi. The deeper you go into your lungs, the smaller and smaller the tubes become as they keep dividing in two. The very smallest tubes end with tiny sacs. These sacs look like grape clusters under the microscope. These are called alveoli. They diffuse oxygen into the blood and receive carbon dioxide being returned to the lungs from the blood. Carbon dioxide travels out of your body when you exhale.

Your body has a special way of making sure that you can get the oxygen that you need when you breathe. Your chest actually changes size when you inhale. You have muscles that are attached to your ribs. These muscles pull up when you inhale. Your diaphragm, a large muscle under your lungs, pulls down. This gives plenty of room so you can get the air you need.

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

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) What is the purpose of the circulatory system?

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2) Identify the parts of the respiratory system.

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3) What is the function of the alveoli?

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4) How does the body get rid of carbon dioxide?

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5) How does your body make room for a deep breath?

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# It Circulates

**Cross-Curricular Focus: Life Science**



The circulatory system is the transport system of the human body. Your body is like a map filled with passageways of different sizes that are filled with blood. **Arteries** and **veins** are the body's largest blood vessels. Arteries carry oxygen-rich blood from the lungs and through the heart so it can be delivered to all the cells of the body. Veins carry carbon dioxide waste back to the heart and into the lungs so the carbon dioxide can be exhaled. **Capillaries** are the tiniest blood vessels. They are especially helpful in the lungs, where the gas exchanges take place in air sacs called alveoli. Under a microscope, alveoli look like grape clusters.

At the very center of the circulatory system is the heart. Your heart is about the same size as your fist, but it is made of muscle. Its job is to pump your blood through all those blood vessels. It never stops working, even when you are sleeping. It is the strongest muscle in your body. Your heart has four chambers, or spaces, inside it. They are the left and right **ventricles**, and the left and right atriums. Each chamber is separated by a valve that allows blood flow in only one direction. The opening and closing of the valves is what you can hear through a stethoscope when you visit the doctor. The blood being pushed through the valves is what you feel as your pulse.

Blood looks like a simple red liquid when you have a cut or a scrape. That's only because your eyes cannot see what is going on inside the blood at the microscopic level. The reason blood looks red to us is because it contains an iron-rich substance called hemoglobin. Hemoglobin allows blood to hold on to oxygen and carry it around the body. Hemoglobin is found in disc-shaped cells called red blood cells. There are also white blood cells in our blood. They are larger than red blood cells and are important because they help us fight disease. Platelets, another kind of cell found in our blood, help us form scabs when we are injured so we don't lose too much blood. All of these cells float in a liquid called plasma. Plasma also carries sugar to cells and waste products away from cells.

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

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) What is the function of the white blood cells?

\_\_\_\_\_

\_\_\_\_\_

2) How are arteries and veins alike?

\_\_\_\_\_

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3) Based on other information in the passage, what gases are being exchanged in the alveoli?

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\_\_\_\_\_

4) What is the main idea of this passage?

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5) What does hemoglobin do?

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# Down the Hatch

Cross-Curricular Focus: Life Science



A car needs energy to get where it's going. Your body must have fuel to do all the things it needs to do so you can grow up healthy and strong. The **digestive** system takes care of the body's need for fuel. It is made up of a group of organs that work together. They pass fuel in the form of food from one organ to the next until the entire process is complete. Waste products then pass out of the body.

The digestive system goes to work the moment you put food into your mouth. Immediately, the salivary glands in your mouth moisten the food. The saliva begins breaking down the food into smaller and smaller pieces. Your teeth also get involved, biting and grinding the large pieces. Finally, the pieces are small enough to swallow. Your tongue is kind of like a traffic director, pushing food around in your mouth to make the most of your saliva and teeth. Then, your tongue pushes your food to the back of your mouth so you can swallow.

As your food leaves your mouth, it enters a tube called the **esophagus**. Gravity and muscles push your food down to the **stomach**. In the stomach it is greeted by strong acids. During the next couple of hours, acids and enzymes break your food into a soupy liquid.

Believe it or not, your body has still not received energy from your food. Your liquefied food finally passes into the small **intestine**. This is a long tube that is coiled back and forth inside your body. The food will remain there for up to six hours. During that time, special chemicals digest the liquid even further. Nutrients your body needs are pulled from it. The nutrients enter your blood through tiny little finger-like projections called villi that line the insides of your small intestine.

What happens to the leftovers? The things your body does not need pass into your large intestine. Water and minerals are absorbed out of the food and into your blood over the next 10-36 hours. After most of the liquid is removed, the rest of the leftover material passes out of your body as solid waste.

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

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) Explain what happens to food while it is still in your mouth. \_\_\_\_\_

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2) What is the name for the tube from the mouth to the stomach? \_\_\_\_\_

3) What are villi? \_\_\_\_\_

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4) At what point during the digestive process does your body begin to receive energy from the food? \_\_\_\_\_

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5) Where is your food likely to be two hours after you eat? \_\_\_\_\_

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# The Excretory System

Cross-Curricular Focus: Life Science

Your body is approximately 60% water. Water is part of all the cells in your body and the plasma in your blood. Water helps your cells receive the nutrients they need, and it helps take away the wastes.

All living things produce wastes. It is the job of the **excretory** system to regulate the amount of water that you have in your body and to help remove wastes from your system. If wastes build up in your blood and in your cells, your body becomes toxic, which can be deadly.

Several different organs are involved in your excretory system. Even your skin participates in the process! You have sweat glands that can release water onto the surface of your skin to keep you from getting overheated. You might find it inconvenient to sweat in certain situations, but people who physically cannot sweat are in constant danger of dying from heat stroke, so be glad if you can sweat!

Your liver is an important part of the process as well. Whenever your body recycles parts of cells that are damaged or old, they become part of the wastes that need to be removed. This recycling puts a lot of nitrogen into your blood. Your liver filters the nitrogen out of your blood, changing it into urea. Without your liver, you could die of nitrogen poisoning.

Just inside your lower back are two large bean-shaped organs called your **kidneys**. Their main job is to filter out the urea in your blood. The kidneys have a sophisticated system of pumps and tubes. Most of the liquid is returned to the blood, where it continues on its way through the circulatory system. Your kidneys have sensors that tell it how much water to release. If you've been drinking a lot of water, your blood will have more water in it. Your kidneys can tell. They send only the right amount of water back into the blood. The small portion of liquid that remains behind becomes **urine**. It drains through tiny tubes called **ureters** into a muscular bag called the **bladder**. Your body knows when your bladder is full and needs to be emptied. Your brain receives a signal to let you know that it's time to visit the bathroom.

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

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) In your own words, explain why the excretory system is important to your body.

\_\_\_\_\_

\_\_\_\_\_

2) Why is it dangerous to be unable to sweat?

\_\_\_\_\_

\_\_\_\_\_

3) What substance does the liver change into urea?

\_\_\_\_\_

\_\_\_\_\_

4) Which organs turn liquid into urine?

\_\_\_\_\_

\_\_\_\_\_

5) What happens if waste builds up in our body?

\_\_\_\_\_

\_\_\_\_\_



# Fungi are Alive!

Cross-Curricular Focus: Life Science



You might think that all living things are classified as either plants or animals, but there are some mysterious little organisms which are neither, yet are still alive. Many are invisible, hiding deep in the ground or floating silently on the air. Unlike plants, they do not rely on the heat or light of the sun for survival. They have no chlorophyll and do not create food through photosynthesis. They must find a source of nutrients outside themselves. They are very adaptable to any weather conditions. If temperatures fall too low to support life, they go into a deep sleep. This sleep is like the hibernation state that some animals use during the coldest part of the winter. In this inactive state, they wait for living conditions to get better.

These mysterious little creatures are all around us. We call them **fungi**, and we even use their extraordinary abilities to help us produce some of our favorite foods. If you enjoy biting into a nice, fluffy piece of bread, you can thank the yeast that helped the bread rise. Yes, yeast is a **fungus**. If you like mushrooms on your pizza or in your salad, you are eating fungi, too.

Because of fungi, we are able to control nasty infections with antibiotics. You may have heard of the most common antibiotic: penicillin. Dr. Alexander Fleming discovered penicillin in 1928 completely by accident. He left his science experiment out on the counter instead of cleaning up after himself. When he came back from his vacation, a strange bluish fungus was growing on it. Penicillin had been discovered.

As people become more aware of better ways to meet our survival needs without harming our planet, we are finding more and more uses for fungi. We can create pesticides to control insects and make detergents that are more Earth-friendly. It makes sense that fungi can do things without harming Earth. They have been turning dead plant materials into rich soil for thousands of years. They eat the nutrients that would otherwise be wasted. Without them, we'd be walking around on thick layers of dead leaves and other discarded plant materials.

Although there are many good things about fungi, we must not forget that some fungi are harmful. There are certain varieties that will make us sick or give us skin reactions, like athlete's foot. It is important to be aware of the various types of fungi. We can benefit from the good fungi and protect ourselves from the harmful ones.

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

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) Why can't fungi make their own food using photosynthesis?

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\_\_\_\_\_

2) Name at least two ways that fungi can be beneficial for us.

\_\_\_\_\_

\_\_\_\_\_

3) Give an example of one way that fungi can be harmful for us.

\_\_\_\_\_

\_\_\_\_\_

4) What do fungi do when it gets too cold for them?

\_\_\_\_\_

\_\_\_\_\_

5) Imagine a world with no fungi. How would their absence impact your life?

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\_\_\_\_\_

#1

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

Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

Date : \_\_\_\_\_

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Mushroom

For each Shape plot the ordered pairs on the axis and connect them in order.  
Do not connect the Shapes to each other.

**Shape 1**

(0,-4.5) , (1,-4.5) , (3,-5) , (6,-6) , (8,-7) , (8.5,-9) , (8,-11) , (7,-12) , (5.5,-13) , (3,-13.5) , (0,-13.5)  
(-2,-13.5) , (-5,-13) , (-6,-12.5) , (-7,-11) , (-7.5,-10) , (-7.5,-8.5) , (-7.5,-8) , (-7,-7) , (-6,-6) , (-3,-5) , (0,-4.5)

**Shape 2**

(8.5,-9) , (10,-8) , (11.5,-7) , (12.5,-5.5) , (13,-4) , (13.5,-2) , (13.5,0) , (13,2) , (12.5,4) , (11,6.5)  
(10,8) , (9,9) , (7,10.5) , (5,11.5) , (3,12) , (1,12.5) , (0,12.5) , (-2,12) , (-4,11.5) , (-6,10.5)  
(-8,9) , (-9,8) , (-10.5,6.5) , (-11.5,5) , (-12,3) , (-12.5,0) , (-12.5,-1) , (-12.5,-4) , (-12,-5) , (-11,-6.5)  
(-9.5,-8) , (-7.5,-8.5)

**Shape 3**

(-12.5,-4) , (-11,-2) , (-10.5,-.5) , (-10,2) , (-10,5) , (-10.5,6.5)

**Shape 4**

(11,6.5) , (10.5,4) , (10.5,2) , (11,0) , (12,-2) , (13,-4)

**Shape 5**

(1,-1) , (-1,-1) , (-3,0) , (-5,2) , (-6,4) , (-6,6) , (-5.5,8) , (-4,10) , (-2,11) , (-.5,11.5)  
(3,11) , (5,10) , (6.5,8) , (7,6) , (7,4) , (6,2) , (4,0) , (1,-1)

**Shape 6**

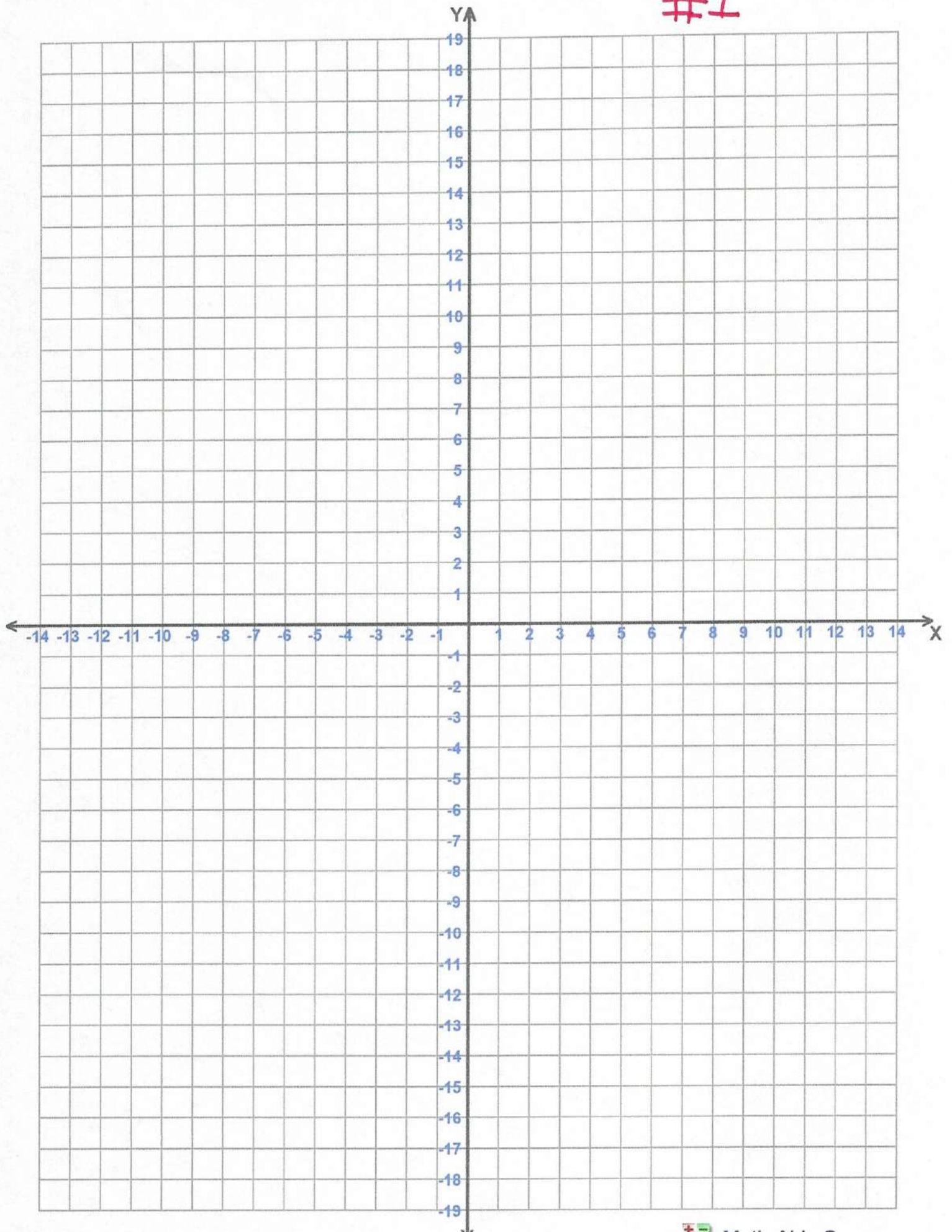
(-2.5,-6) , (-1.5,-7) , (-1.5,-9.5) , (-2.5,-10.5) , (-3.5,-9.5) , (-3.5,-7) , (-2.5,-6)

**Shape 7**

(3,-6) , (2,-7) , (2,-9.5) , (3,-10.5) , (4,-9.5) , (4,-7) , (3,-6)



#1





#2

## Pikachu

For each Shape plot the ordered pairs on the axes and connect them in order.  
Do not connect the Shapes to each other.

## Shape 1

$(-3.5, -14.5)$ ,  $(-4.5, -14.5)$ ,  $(-5.5, -16)$ ,  $(-4.5, -15.5)$ ,  $(-4.5, -16)$ ,  $(-4, -15.5)$ ,  $(-4, -16.5)$ ,  $(-2.5, -14.5)$ ,  $(-5, -13.5)$ ,  $(3, -14.5)$   
 $(0, -14)$ ,  $(-2.5, -14.5)$

## Shape 2

$(4, -14)$ ,  $(4.5, -14)$ ,  $(6, -15.5)$ ,  $(5, -15.5)$ ,  $(5.5, -16)$ ,  $(4.5, -15.5)$ ,  $(5, -17)$ ,  $(3, -14.5)$

## Shape 3

$(-4.5, -14.5)$ ,  $(-5, -14.5)$ ,  $(-6, -14)$ ,  $(-7, -13)$ ,  $(-7.5, -12)$ ,  $(-8.5, -10)$ ,  $(-8.5, -8)$ ,  $(-8, -5)$ ,  $(-7.5, -2.5)$ ,  $(-6, -3)$

## Shape 4

$(4.5, -14)$ ,  $(5, -14)$ ,  $(6, -13.5)$ ,  $(6.5, -13)$ ,  $(7, -12)$ ,  $(7.5, -10)$ ,  $(7.5, -7.5)$ ,  $(7.5, -5)$ ,  $(7, -3)$ ,  $(6, -1.5)$ ,  $(5, -2.5)$

## Shape 5

$(6, -1.5)$ ,  $(6.5, -1)$ ,  $(7, 0)$ ,  $(7, 1)$ ,  $(6.5, 3)$ ,  $(6, 4)$ ,  $(5, 5.5)$ ,  $(4.5, 7)$ ,  $(8, 6.5)$ ,  $(11, 10)$   
 $(13, 9.5)$ ,  $(8, 6.5)$ ,  $(5, 5.5)$

## Shape 6

$(7, -12)$ ,  $(9, -9.5)$ ,  $(10.5, -7.5)$ ,  $(9, -6.5)$ ,  $(9, -7)$ ,  $(7.5, -7.5)$

## Shape 7

$(9, -7)$ ,  $(7.5, -5)$ ,  $(9.5, -3.5)$ ,  $(7.5, -1)$ ,  $(9, 2)$ ,  $(14, 8)$ ,  $(14, 5)$ ,  $(11.5, -1.5)$ ,  $(13, -3.5)$ ,  $(9.5, -5.5)$ ,  $(10.5, -7.5)$

## Shape 8

$(11, 10)$ ,  $(7, 9.5)$ ,  $(3, 8.5)$ ,  $(1, 9)$ ,  $(-1, 9)$ ,  $(-3, 8.5)$ ,  $(-5, 8)$ ,  $(-7, 10)$ ,  $(-11, 12)$ ,  $(-13.5, 13)$   
 $(-11.5, 10)$ ,  $(-10, 8)$ ,  $(-11, 12)$

## Shape 9

$(-7.5, 5.5)$ ,  $(-6, 7)$ ,  $(-10, 8)$ ,  $(-7.5, 5.5)$ ,  $(-8, 3)$ ,  $(-8.5, 1)$ ,  $(-8.5, -1)$ ,  $(-8, -2)$ ,  $(-7.5, -2.5)$

## Shape 10

$(-6.5, -2)$ ,  $(-5.5, -1.5)$ ,  $(-5.5, -1)$ ,  $(-5.5, 0)$ ,  $(-6.5, .5)$ ,  $(-7.5, 0)$ ,  $(-7.5, -1)$ ,  $(-7, -1.5)$ ,  $(-6.5, -2)$

## Shape 11

$(4, 0)$ ,  $(4.5, 1)$ ,  $(5.5, 1)$ ,  $(6.5, .5)$ ,  $(6, -.5)$ ,  $(5, -1.5)$ ,  $(4.5, -1)$ ,  $(4, 0)$

## Shape 12

$(1, -4)$ ,  $(-.5, -5.5)$ ,  $(-1.5, -5)$ ,  $(-2.5, -4)$ ,  $(1, -4)$

## Shape 13

$(2, -.5)$ ,  $(1, -1)$ ,  $(-.5, -.5)$ ,  $(-1, -.5)$ ,  $(-2, -1)$ ,  $(-3, -.5)$

## Shape 14

$(-1.5, 1.5)$ ,  $(-.5, 1)$ ,  $(.5, 1.5)$ ,  $(-1.5, 1.5)$

## Shape 15

$(3, 2)$ ,  $(4, 2)$ ,  $(4.5, 2.5)$ ,  $(4.5, 3)$ ,  $(4.5, 4)$ ,  $(4, 4.5)$ ,  $(3, 4.5)$ ,  $(2, 4)$ ,  $(2, 3)$ ,  $(3, 2)$

## Shape 16

$(-5, 1.5)$ ,  $(-4, 2)$ ,  $(-3.5, 3)$ ,  $(-4, 4)$ ,  $(-4.5, 4.5)$ ,  $(-5.5, 4.5)$ ,  $(-6, 4)$ ,  $(-6.5, 3)$ ,  $(-6, 2)$ ,  $(-5, 1.5)$

## Shape 17

$(3.5, -5)$ ,  $(2.5, -9.5)$ ,  $(3, -9)$ ,  $(3, -10)$ ,  $(4, -9)$ ,  $(4, -10)$ ,  $(6.5, -6)$

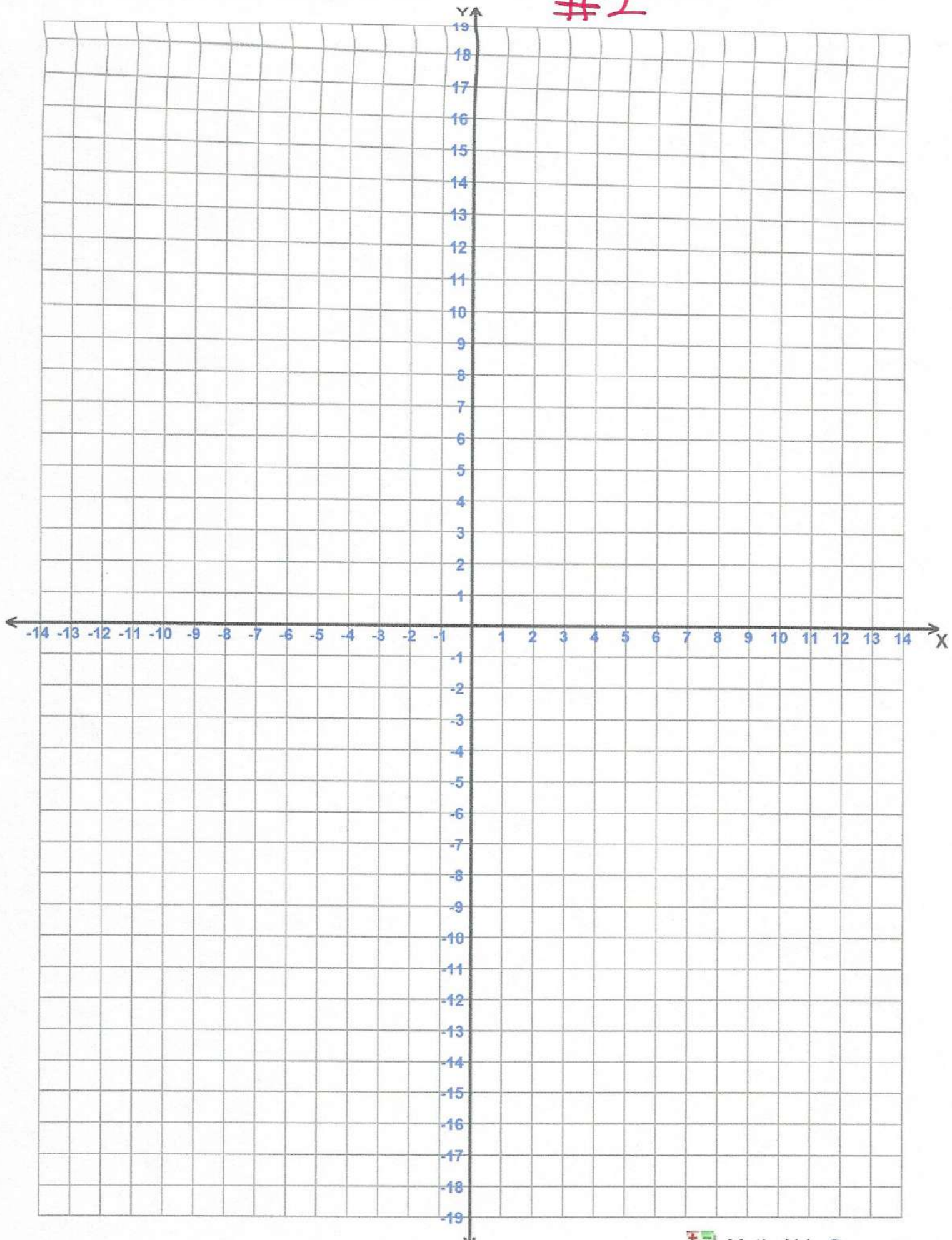
## Shape 18

$(-5.5, -4.5)$ ,  $(-3, -9)$ ,  $(-3, -10)$ ,  $(-3.5, -9.5)$ ,  $(-3.5, -10.5)$ ,  $(-4, -10)$ ,  $(-4, -11)$ ,  $(-7, -8)$

Draw a .5 radius circle around these points.

$(-5.5, 3.5)$  and  $(3, 3.5)$

#2




















Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

#3

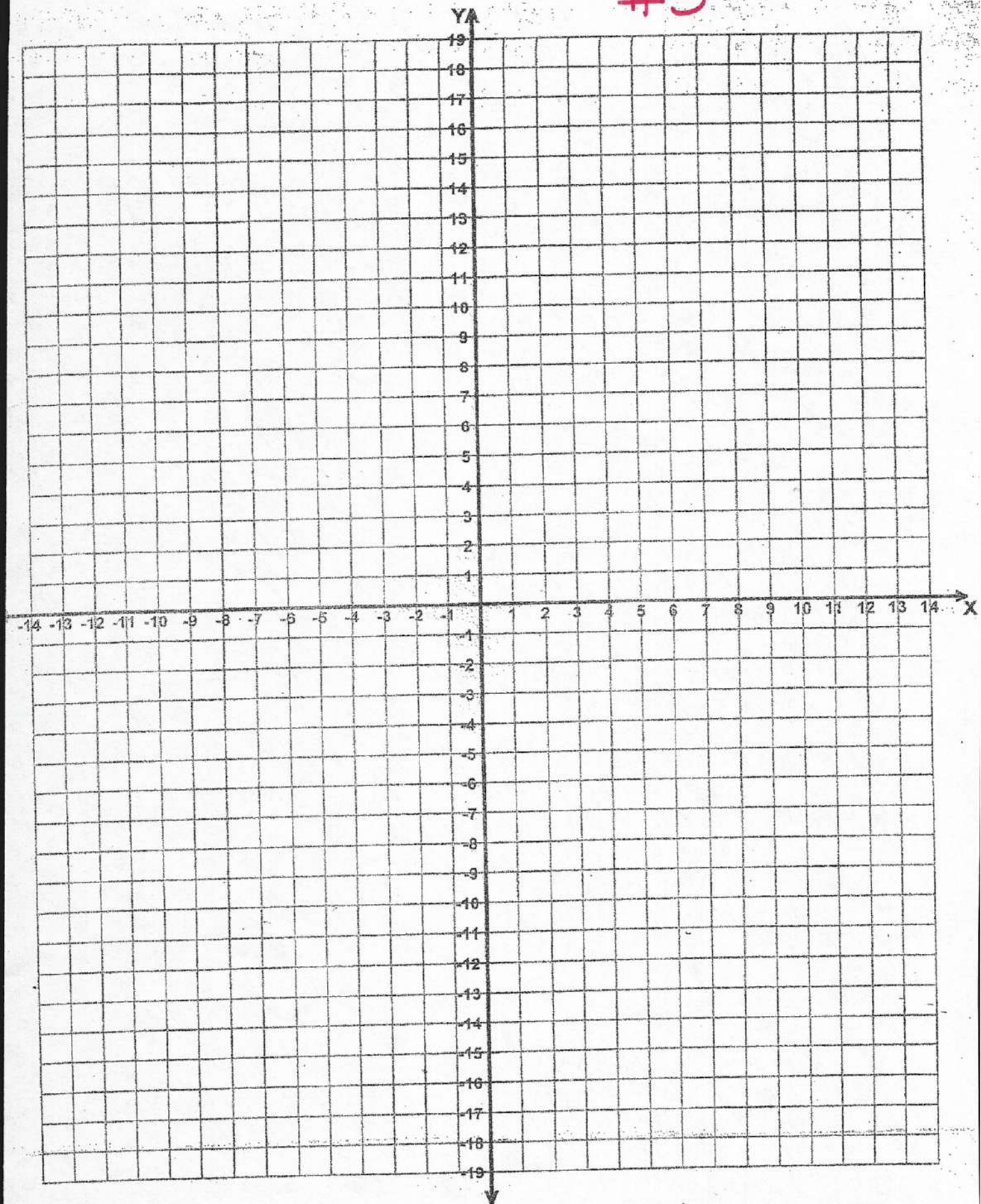
## Mystery Coordinate Plane Graphing Activity

There is a picture hidden on the coordinate plane. Connect the points with lines to reveal it. Hint: She's a cutie!

(10, 0)		(7.5, 4.5)	(4.5, -2.5)	(8, 0)
(9.5, 2.5)	(-1, 9)	(7, 5.5)	(3.5, -2)	
(9.5, 3)	(-2, 7)	(6.5, 5.5)	(4, -1)	(12, -2.5)
(10, 5)	(-2, 5)			(11, -2)
(10, 6)	(-1, 4.5)	(2, 6)	(-9.5, -1)	(8.5, -2)
(9, 7)	(1, 4.5)	(1, 6.5)	(-11, -5)	(8.5, -2.5)
(8.5, 7.5)	(2, 5)	(1.5, 7.5)	(-14, -1)	(12, -2.5)
(9, 9)	(3, 4)	(2, 8)	(-14, -1.5)	
(8, 10.5)	(4, 3.5)	(3.5, 7.5)	(-9.5, -1)	(11, -5)
(6, 10)	(4.5, 3.5)			(8, -4)
(3.5, 9)	(6, 2.5)	(0, -3)	(-11, -3)	(8, -4.5)
(1, 10.5)	(7, 2)	(-1, -2.5)	(-12.5, -3.5)	(9, -5)
(0, 10)	(9, 3)	(-1.5, -3)	(-12.5, -4)	(11, -5.5)
(-1, 9)	(10, 5)	(-2, -4)	(-11, -3.5)	(11, -5)
(-5, 8.5)		(-1, -4.5)	(-9, -3)	
(-7, 9)	(2, 5)	(.5, -4)	(-9.5, -2.5)	
(-9, 9.5)	(2, 6)	(.5, -3.5)	(-11, -3)	
(-10, 9.5)	(2.5, 7)	(0, -3)		
(-11, 8)	(4, 8)		(-10, -5)	
(-11, 6)	(6, 7)	(-6, -1)	(-11, -6)	
(-10.5, 5)	(6.5, 5)	(-7, -1.5)	(-11.5, -6.5)	
(-11, 3)	(5.5, 4)	(-7, -2.5)	(-11.5, -7)	
(-11.5, 0)	(4.5, 3.5)	(-6.5, -3)	(-10, -6)	
(-11, -3)		(-6, -3)	(-8, -5)	
(-10, -5)	(4, 8)	(-5.5, -2.5)	(-8, -4.5)	
(-8, -7)	(3.5, 9)	(-5.5, -1.5)	(-10, -5)	
(-5, -8)		(-6, -1)		
(-1, -8.5)	(6, 7)		(8, 0)	
(.5, -8.5)	(7.5, 7.5)	(4, -1)	(8, -5)	
(4, -8)	(8.5, 7.5)	(4.5, -5)	(10, 0)	
(8, -6)		(5, -1)	(12.5, 0)	
(10, -3)	(5.5, 4)	(5.5, -2)	(12.5, .5)	
(10, 0)	(6.5, 3.5)	(5, -2.5)	(11, .5)	

You are done and now  
you can color!

#3





#4

(X, Y)
<input type="checkbox"/> (0, 16)
<input type="checkbox"/> (-2, 16)
<input type="checkbox"/> (-5, 15)
<input type="checkbox"/> (-9, 13)
<input type="checkbox"/> (-13, 9)
<input type="checkbox"/> (-14, 6)
<input type="checkbox"/> (-14, 4)
<input type="checkbox"/> (-12, 0)
<input type="checkbox"/> (-11, 1)



<input type="checkbox"/> (3, -20)
<input type="checkbox"/> (0, -19)
<input type="checkbox"/> (1, -18)
<input type="checkbox"/> (-2, -19)
<input type="checkbox"/> (-3, -20)
<input type="checkbox"/> (-6, -19)
<input type="checkbox"/> (-5, -18)



<input type="checkbox"/> (-12, 9)
<input type="checkbox"/> (-11, 10)



<input type="checkbox"/> (4, 15)
<input type="checkbox"/> (6, 14)
<input type="checkbox"/> (10, 10)
<input type="checkbox"/> (12, 6)
<input type="checkbox"/> (13, 1)
<input type="checkbox"/> (12, -9)
<input type="checkbox"/> (11, -12)
<input type="checkbox"/> (10, -11)



(X, Y)
<input type="checkbox"/> (-11, 4)
<input type="checkbox"/> (-11, 3)
<input type="checkbox"/> (-10, 3)
<input type="checkbox"/> (-10, 4)
<input type="checkbox"/> (-11, 4)



<input type="checkbox"/> (-15, -20)
<input type="checkbox"/> (-14, -19)
<input type="checkbox"/> (-11, -18)
<input type="checkbox"/> (-12, -19)
<input type="checkbox"/> (-9, -20)
<input type="checkbox"/> (-8, -19)
<input type="checkbox"/> (-5, -18)



<input type="checkbox"/> (-9, 2)
<input type="checkbox"/> (-10, 1)
<input type="checkbox"/> (-10, -2)
<input type="checkbox"/> (-11, -4)



<input type="checkbox"/> (8, -16)
<input type="checkbox"/> (7, -19)
<input type="checkbox"/> (6, -16)
<input type="checkbox"/> (6, -13)
<input type="checkbox"/> (8, -11)
<input type="checkbox"/> (7, -6)
<input type="checkbox"/> (5, -1)
<input type="checkbox"/> (2, 2)



(X, Y)
<input type="checkbox"/> (-1, 1)
<input type="checkbox"/> (-2, -1)
<input type="checkbox"/> (-2, -3)
<input type="checkbox"/> (-4, -1)
<input type="checkbox"/> (-5, 3)



<input type="checkbox"/> (6, 14)
<input type="checkbox"/> (5, 16)
<input type="checkbox"/> (7, 17)
<input type="checkbox"/> (8, 18)
<input type="checkbox"/> (5, 19)
<input type="checkbox"/> (3, 19)
<input type="checkbox"/> (0, 18)
<input type="checkbox"/> (-2, 16)



<input type="checkbox"/> (15, -19)
<input type="checkbox"/> (14, -20)
<input type="checkbox"/> (13, -19)
<input type="checkbox"/> (14, -17)
<input type="checkbox"/> (12, -19)
<input type="checkbox"/> (10, -20)
<input type="checkbox"/> (7, -20)
<input type="checkbox"/> (5, -19)
<input type="checkbox"/> (3, -17)
<input type="checkbox"/> (4, -19)
<input type="checkbox"/> (3, -20)



(X, Y)
<input type="checkbox"/> (-2, 7)
<input type="checkbox"/> (-3, 4)
<input type="checkbox"/> (-1, 1)
<input type="checkbox"/> (0, -1)
<input type="checkbox"/> (2, -2)
<input type="checkbox"/> (2, 2)
<input type="checkbox"/> (3, 4)
<input type="checkbox"/> (3, 5)
<input type="checkbox"/> (2, 6)



<input type="checkbox"/> (-3, 4)
<input type="checkbox"/> (-5, 3)
<input type="checkbox"/> (-8, 0)
<input type="checkbox"/> (-10, -4)
<input type="checkbox"/> (-11, -4)
<input type="checkbox"/> (-12, -3)
<input type="checkbox"/> (-12, 0)

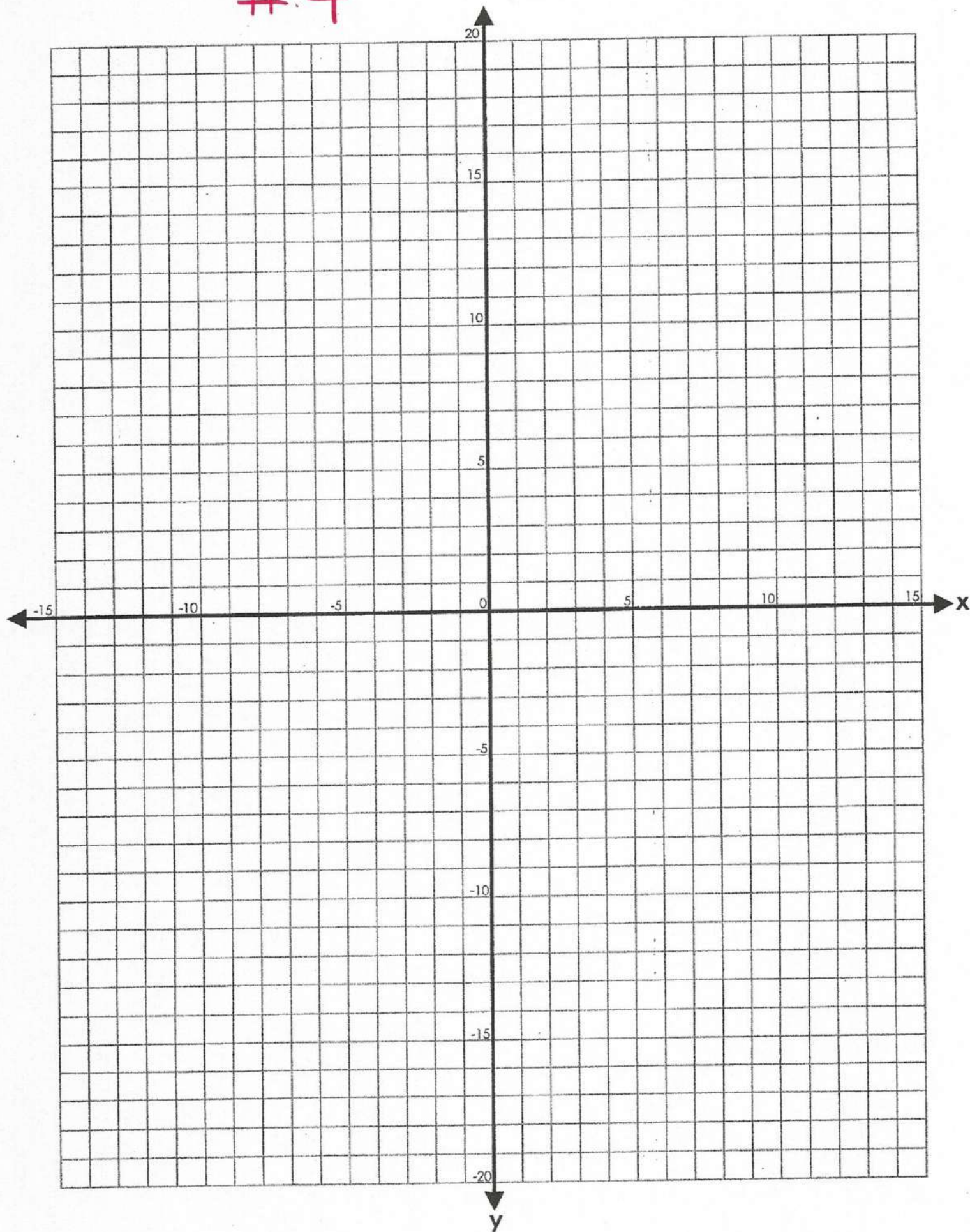


<input type="checkbox"/> (9, -13)
<input type="checkbox"/> (8, -14)
<input type="checkbox"/> (8, -16)
<input type="checkbox"/> (9, -17)
<input type="checkbox"/> (10, -19)
<input type="checkbox"/> (11, -18)
<input type="checkbox"/> (12, -15)
<input type="checkbox"/> (11, -12)



Now color your picture

#4





#5

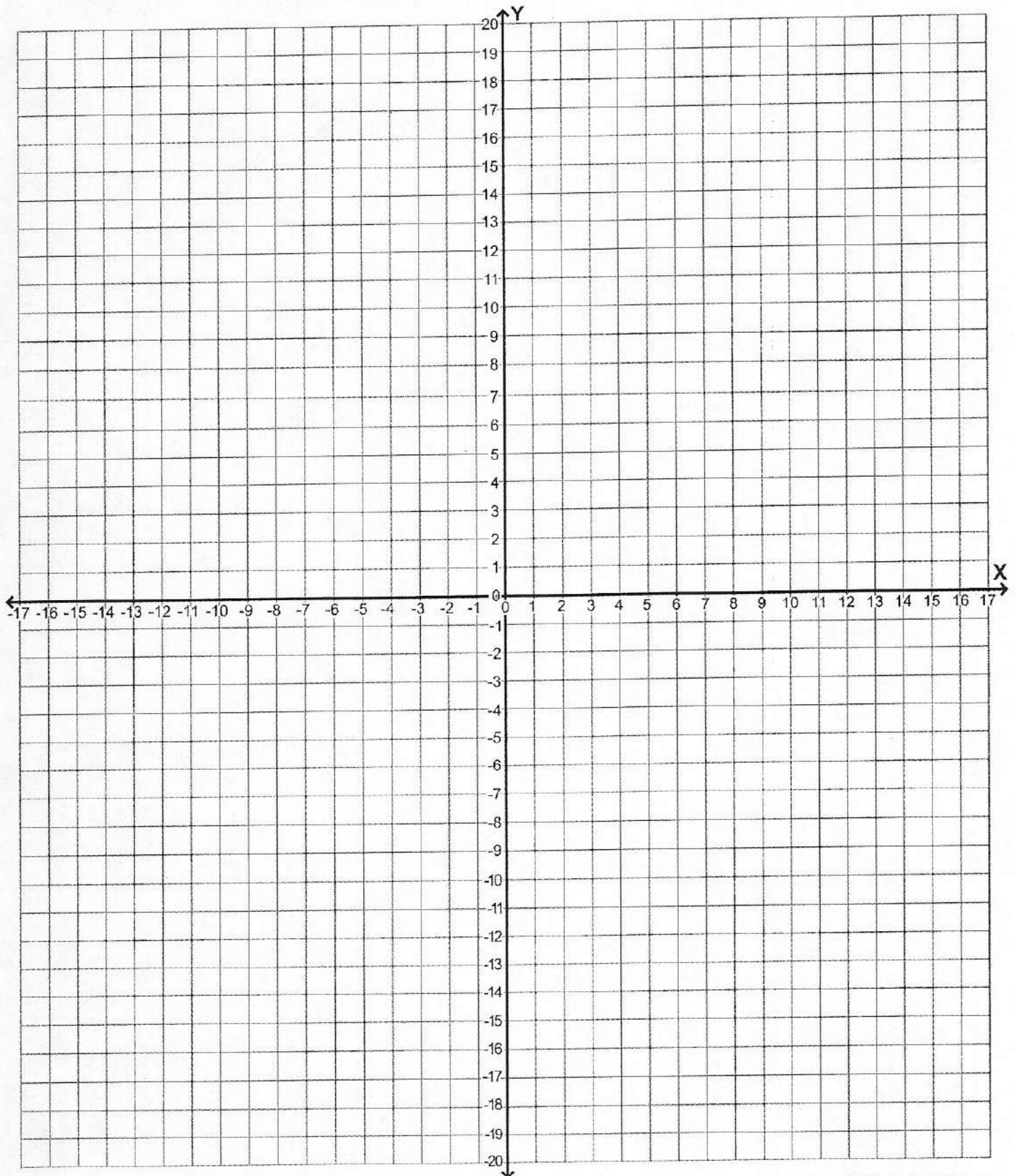
Coordinate Graphing Mystery Picture - Four Quadrants  
Plot the ordered pairs and connect them with a straight line as you plot.

START	(1,0)	START	START	START
(2,5)	(-1,-2)	(-10,5)	(-1,-17)	(6,2)
(3,5)	(-2,-4)	(-7,4)	(0,-15)	(6,4)
(3,7)	STOP	(-7,2)	(0,-17)	(4,4)
(2,7)		(-10,1)	(1,-16)	(4,2)
(2,5)	START	STOP	STOP	STOP
STOP	(-4,-10)			
	(-5,-11)	START	START	START
START	(-6,-11)	(-2,2)	(10,1)	(4,9)
(-4,-6)	(-7,-10)	(-1,1)	(7,2)	(7,14)
(-3,-7)	(-7,-9)	(1,1)	(7,6)	STOP
(0,-7)	(-6,-8)	(2,2)	(4,9)	
(1,-6)	(-5,-8)	STOP	(-4,9)	START
(1,-5)	(-4,-9)		(-7,6)	(-10,3)
(0,-4)	STOP	START	(-7,1)	(-7,3)
(-2,-4)		(1,9)	(-4,-1)	STOP
(-3,-3)	START	(3,18)	(0,-1)	
STOP	(-1,5)	(8,19)	STOP	START
	(1,5)	(12,17)		(-7,14)
START	(1,4)	(14,10)	START	(-4,9)
(-6,4)	(0,3)	(14,9)	(-3,7)	STOP
(-4,4)	(-1,4)	(12,9)	(-2,7)	
(-4,2)	(-1,5)	(10,10)	(-2,5)	START
(-6,2)	STOP	(7,14)	(-3,5)	(-3,-1)
(-6,4)		(6,15)	(-3,7)	(-4,-4)
STOP	START	(4,16)	STOP	(-4,-10)
	(6,-6)	(2,11)		(-2,-14)
START	(6,-5)	(3,10)	START	(-2,-15)
(10,-17)	(7,-4)	(4,11)	(8,-10)	(-8,-13)
(11,-15)	(9,-4)	(6,15)	(3,-9)	(-10,-14)
(11,-17)	(10,-5)	STOP	(0,-7)	(-10,-17)
(12,-16)	(10,-6)		STOP	(-8,-19)
(13,-17)	(9,-7)	START		(-5,-19)
(14,-16)	(7,-7)	(10,3)	START	(-2,-18)
(15,-17)	(6,-6)	(7,3)	(-6,15)	(-1,-17)
(15,-15)	STOP	(7,4)	(-4,11)	(-1,-15)
(16,-17)		(10,5)	(-3,10)	(0,-13)
(17,-16)	START	STOP	(-2,11)	(1,-15)
(17,-17)	(-10,-16)		(-4,16)	(1,-17)
STOP	(-11,-17)	START	(-6,15)	(2,-18)
	(-12,-15)	(-3,-7)	(-7,14)	(5,-19)
START	(-12,-17)	(-3,-8)	(-10,10)	(8,-19)
(1,0)	(-13,-16)	(-2,-10)	(-12,9)	(10,-17)
(2,-1)	(-14,-17)	(0,-12)	(-14,9)	(10,-14)
(3,-2)	(-14,-15)	(3,-13)	(-14,10)	(8,-13)
(5,-3)	(-15,-17)	(5,-13)	(-12,17)	(2,-15)
(8,-4)	(-16,-16)	(7,-12)	(-8,19)	(2,-14)
(9,-4)	(-17,-17)	(8,-10)	(-3,18)	(3,-13)
(9,0)	STOP	(9,-7)	(-1,9)	STOP
(7,2)		STOP		
(4,2)				

#5

# Coordinate Graphing Mystery Picture - Four Quadrants

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





#6

## Coordinate Graphing Mystery Picture - Four Quadrants

Plot the ordered pairs and connect them with a straight line as you plot.

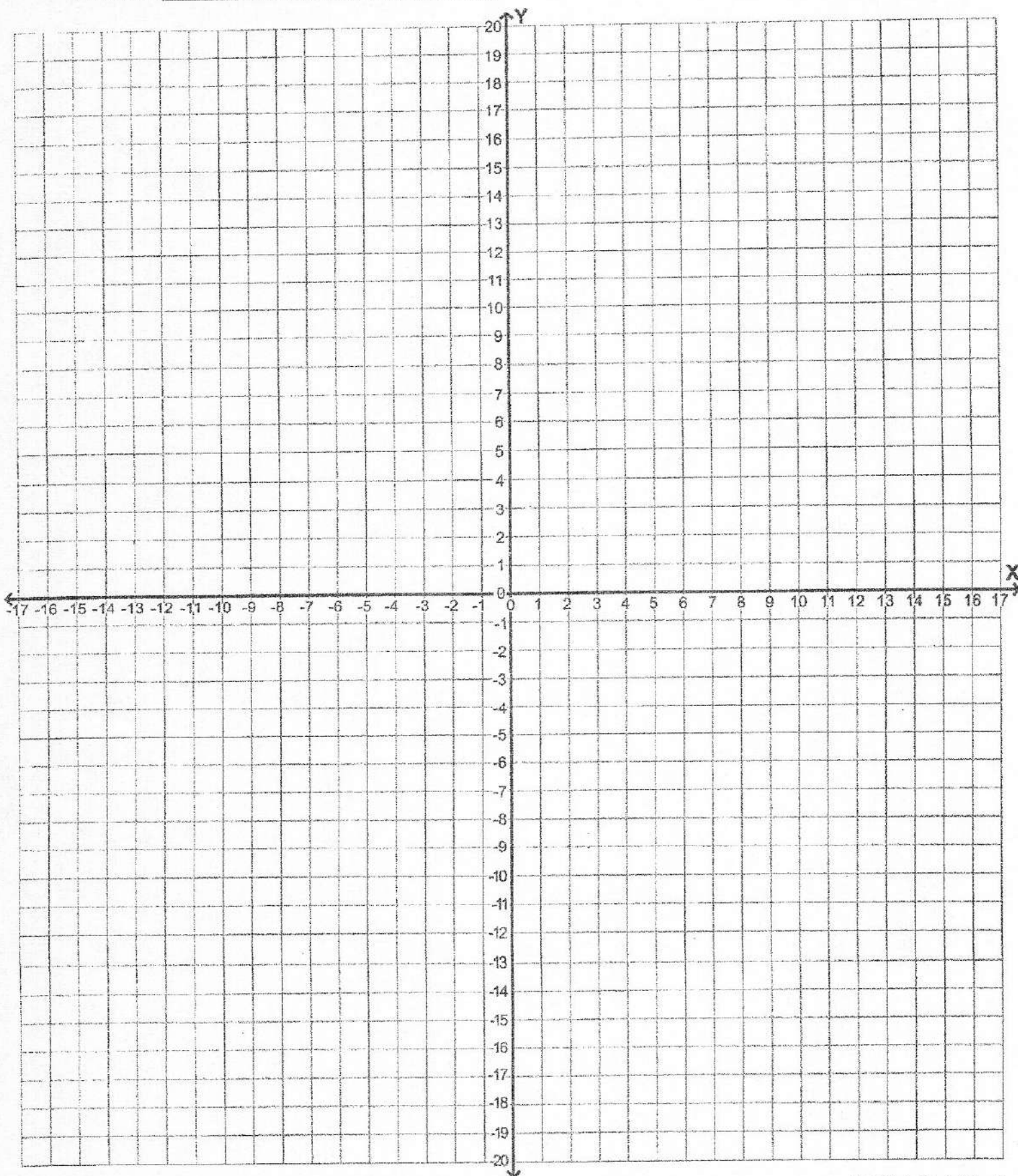
START	STOP	(9,6)	(14,-2)	START
(2,7)		(9,11)	(12,-1)	(3,5)
(3,6)	START	(7,13)	(10,-3)	(6,5)
(4,6)	(-9,11)	(2,13)	(7,-5)	(8,7)
(5,7)	(-12,11)	(0,11)	STOP	(8,10)
(5,8)	(-12,9)	STOP		(6,12)
(4,9)	(-11,9)		START	(3,12)
(3,9)	(-11,10)	START	(0,11)	(1,10)
(2,8)	(-9,10)	(-3,-5)	(-2,13)	(1,7)
(2,7)	STOP	(-1,-6)	(-7,13)	(3,5)
STOP		(0,-3)	(-9,11)	STOP
	START	(1,-3)	(-9,6)	
START	(2,4)	(2,-5)	(-7,4)	START
(-12,-1)	(0,1)	(1,-6)	(-2,4)	(-2,-6)
(-10,-3)	(-2,4)	(4,-6)	(0,6)	(-5,-6)
(-7,-5)	STOP	(4,-3)	STOP	(-4,-7)
(-7,-6)		(3,-4)		(-6,-9)
(-9,-7)	START	(2,-2)	START	(-4,-12)
(-12,-7)	(-13,-1)	(-1,-2)	(10,1)	(-1,-12)
(-14,-5)	(13,-1)	(-3,-5)	(10,10)	(-1,-10)
(-14,-2)	(13,1)	STOP	STOP	(-4,-10)
(-12,-1)	(4,1)			(-4,-9)
STOP	(3,0)	START	START	(-3,-8)
	(-3,0)	(-5,7)	(11,-7)	(-2,-9)
START	(-4,1)	(-5,8)	(10,-14)	(-2,-6)
(-1,10)	(-13,1)	(-4,9)	(-10,-14)	STOP
(-3,12)	(-13,-1)	(-3,9)	(-11,-7)	
(-6,12)	STOP	(-2,8)	STOP	START
(-8,10)		(-2,7)		(-10,11)
(-8,7)	START	(-3,6)	START	(-11,18)
(-6,5)	(4,-14)	(-4,6)	(-10,1)	(-6,15)
(-3,5)	(4,-16)	(-5,7)	(-10,10)	(6,15)
(-1,7)	(2,-17)	STOP	STOP	(11,18)
(-1,10)	(2,-18)			(10,11)
STOP	(4,-17)	START	START	STOP
	(4,-19)	(9,10)	(-5,-14)	
START	(5,-19)	(11,10)	(-5,-16)	
(2,-13)	(5,-17)	(11,9)	(-7,-17)	
(2,-12)	(7,-18)	(12,9)	(-7,-18)	
(4,-12)	(7,-17)	(12,11)	(-5,-17)	
(6,-9)	(5,-16)	(9,11)	(-5,-19)	
(5,-6)	(5,-14)	STOP	(-4,-19)	
(3,-7)	STOP		(-4,-17)	
(4,-9)		START	(-2,-18)	
(4,-10)	START	(7,-5)	(-2,-17)	
(2,-10)	(0,11)	(7,-6)	(-4,-16)	
(2,-9)	(0,6)	(9,-7)	(-4,-14)	
(0,-11)	(2,4)	(12,-7)	STOP	
(2,-13)	(7,4)	(14,-5)		



#6

# Coordinate Graphing Mystery Picture - Four Quadrants

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





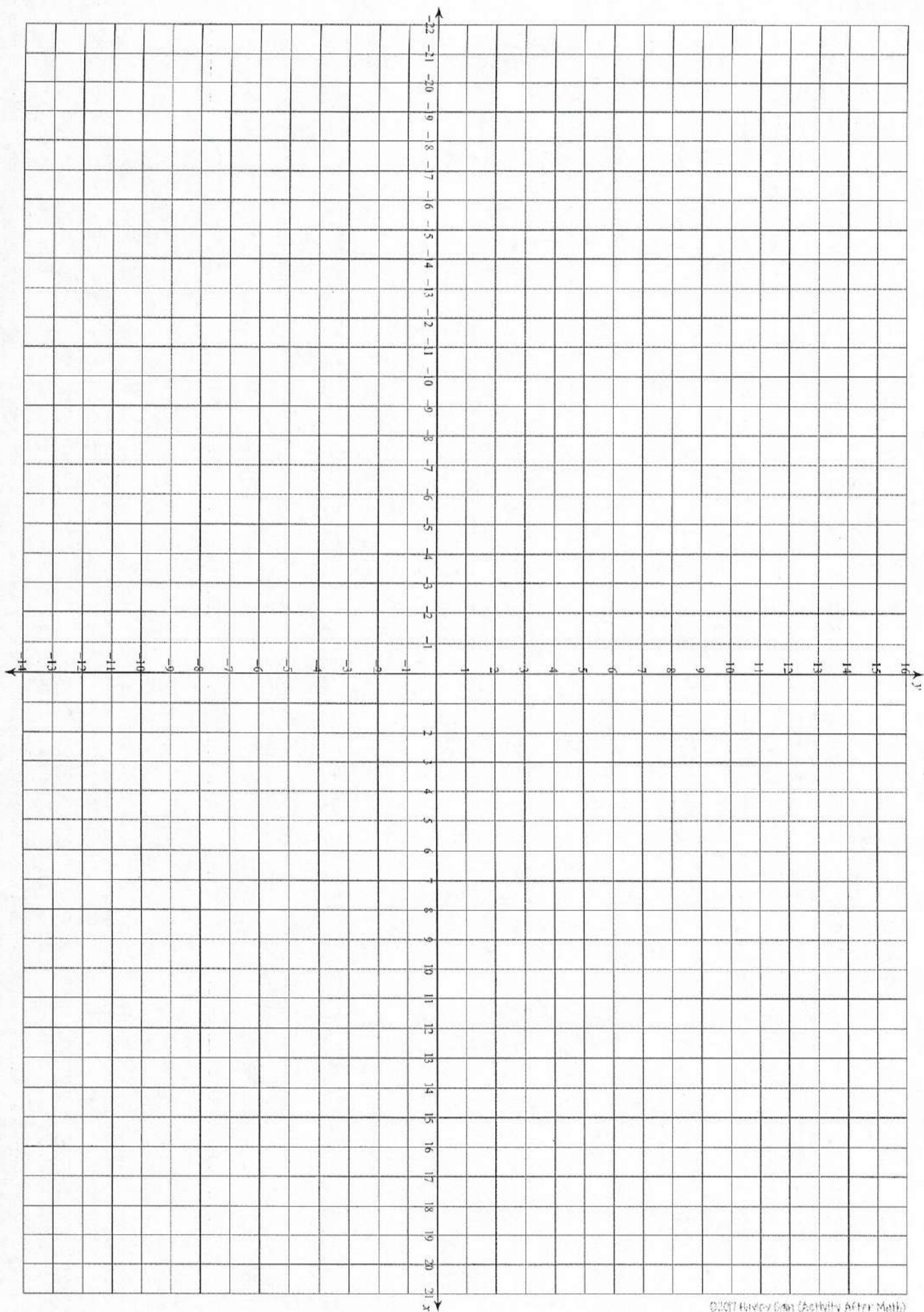
NAME: \_\_\_\_\_ DATE: #7 CLASS: \_\_\_\_\_

# "STARS AND STRIPES"

Directions: Plot the ordered pair of numbers on a graph in the order they are listed connecting them with line segments as you plot them. Start a new line after the word "STOP".

(-18, 9)	(0, -11.5)	(19, 9)	(5, 7)	(-18, 8)
(-18.5, 8.5)	(1, -12.5)	(19, 10)	(6, 8)	(-17.5, 3)
(-19, 9)	(3, -13.5)	(18.5, 10.5)	(6.5, 9)	(-17, 2)
(-20, 10)	(2.5, -12)	(18.5, 12)	(5, 9)	(-16.5, 2)
(-20, 8.5)	(2, -11)	(19.5, 12.5)	(4.5, 9.5)	(-16, 3)
(-19.5, 8)	(3, -10)	(20, 13)	(3, 8)	(-15.5, 5)
(-19.5, 6)	(4, -9)	(19.5, 13.5)	(2, 8)	(-15.5, 8)
(-20.5, 4)	(6, -8.5)	(19, 13.5)	(3, 9.5)	(-15.5, 5)
(-20, 2.5)	(8.5, -9)	(18.5, 15)	(1, 10)	(-15.5, 2)
(-21, 1)	(8.5, -8)	(17, 15)	(-3, 9.5)	STOP
(-21, 0)	(8, -7)	(16, 14)	(-7, 9)	
(-20, -0.5)	(9, -6.5)	(16.5, 13)	(-11, 9)	(-13, 7.5)
(-19, -4)	(12, -7)	(16.5, 12)	(-15, 9.5)	(-13.5, 8)
(-19, -5)	(13, -6.5)	(14, 11)	(-18.5, 10)	(-14, 8)
(-18, -6)	(13.5, -6.5)	(13.5, 10)	(-18, 9)	(-14, 7)
(-16, -7)	(14.5, -8)	(14, 9)	STOP	(-13.5, 4)
(-15.5, -8)	(16, -9.5)	(13, 8.5)		(-13.5, 2)
(-15, -7.5)	(17, -9.5)	(12, 8)	(15, 7)	(-14.5, 2)
(-14, -7.5)	(17.5, -9)	(11, 6)	(15.5, 6)	(-15, 2.5)
(-13, -8.5)	(17, -8)	(9.5, 5)	(16.5, 6)	STOP
(-12, -9)	(16, -7)	(10, 7.5)	(15.5, 5.5)	
(-11, -9.5)	(14.5, -5)	(9.5, 8)	(16, 4.5)	(-13, 2)
(-9, -9.5)	(14.5, -4)	(9, 7.5)	(15, 5)	(-11, 8)
(-8, -9)	(15, -3)	(8, 8)	(14, 4.5)	(-9, 2)
(-6, -8.5)	(17, 0)	(7, 8.5)	(14.5, 5.5)	STOP
(-5, -10)	(17.5, 2)	(6.5, 7)	(13.5, 6)	
(-4, -11)	(17, 4.5)	(7, 5)	(14.5, 6)	(-11.5, 6)
(-3, -11)	(16.5, 6)	(6.5, 4)	(15, 7)	(-10.5, 6)
(-2, -9.5)	(16.5, 6.5)	(5.5, 5)	STOP	STOP
(-1, -10)	(17, 7.5)	(5, 6)		

#7





For each Shape plot the ordered pairs on the axis and connect them in order.  
Do not connect the Shapes to each other.

**Shape 1**

$(-6, -15.5)$ ,  $(-6, -17)$ ,  $(-7.5, -17.5)$ ,  $(-7.5, -16)$ ,  $(-6, -15.5)$

**Shape 2**

$(-5.5, -13.5)$ ,  $(-5.5, -14.5)$ ,  $(-8, -15.5)$ ,  $(-8, -18.5)$ ,  $(-5.5, -17.5)$ ,  $(-5, -15)$ ,  $(-5.5, -14.5)$

**Shape 3**

$(-5, -15)$ ,  $(-5, -14)$ ,  $(-3, -12.5)$ ,  $(-2, -13)$ ,  $(0, -13.5)$ ,  $(4, -13)$ ,  $(5, -12)$ ,  $(5.5, -10.5)$ ,  $(6, -11)$ ,  $(5, -12)$

**Shape 4**

$(5.5, -10.5)$ ,  $(6.5, -10.5)$ ,  $(6.5, -14)$ ,  $(4, -15)$ ,  $(0, -15.5)$ ,  $(-2, -15.5)$ ,  $(-4, -15)$ ,  $(-5, -14)$

**Shape 5**

$(-5, -14)$ ,  $(-5.5, -13.5)$ ,  $(-6, -13)$ ,  $(-6, -11)$ ,  $(-5, -11)$ ,  $(-5.5, -12)$ ,  $(-4, -12.5)$ ,  $(-5.5, -13.5)$ ,  $(-4, -12.5)$ ,  $(-3, -12.5)$

**Shape 6**

$(-5, -11)$ ,  $(-4, -9)$ ,  $(-2.5, -5.5)$ ,  $(-2, -6)$ ,  $(-5, -6)$ ,  $(2, -5)$ ,  $(3, -4)$ ,  $(4, -2.5)$ ,  $(4.5, -1)$ ,  $(5, 1)$   
 $(5, 3)$ ,  $(4.5, 3.5)$ ,  $(3.5, 4)$ ,  $(4, 2.5)$ ,  $(3.5, 2)$ ,  $(2.5, 2.5)$ ,  $(2.5, 1.5)$ ,  $(2.5, 0)$ ,  $(2, -5)$ ,  $(1, -1.5)$   
 $(0, -2)$ ,  $(-2, -2)$ ,  $(-3.5, -1)$ ,  $(-4, -5)$ ,  $(-5, 5)$

**Shape 7**

$(3.5, 2)$ ,  $(3, 5)$ ,  $(2.5, -1)$ ,  $(2, -2)$ ,  $(1, -2.5)$ ,  $(-5, -3.5)$ ,  $(-1.5, -3)$ ,  $(-3, -2.5)$ ,  $(-4, -2)$ ,  $(-3.5, -1)$   
 $(-4.5, -2)$ ,  $(-4.5, -2.5)$ ,  $(-4, -3.5)$ ,  $(-3.5, -3.5)$ ,  $(-3, -4)$ ,  $(-1.5, -4)$

**Shape 8**

$(-3.5, -3.5)$ ,  $(-4, -4)$ ,  $(-3, -5)$ ,  $(-2.5, -5.5)$

**Shape 9**

$(-4, -5)$ ,  $(-5.5, -1.5)$ ,  $(-6.5, -1)$ ,  $(-6.5, 0)$ ,  $(-7, 1)$ ,  $(-8.5, 2.5)$ ,  $(-8.5, 4.5)$ ,  $(-7.5, 5.5)$ ,  $(-7, 5.5)$ ,  $(-6.5, 6)$   
 $(-4.5, 7)$ ,  $(-4, 7)$ ,  $(-3, 6)$ ,  $(-2, 5)$ ,  $(-2, 4)$ ,  $(-3, 3)$ ,  $(-5, 2)$ ,  $(-6, 3)$ ,  $(-6.5, 4.5)$ ,  $(-7, 5.5)$

**Shape 10**

$(5.5, -10.5)$ ,  $(6, -8)$ ,  $(7, -4)$ ,  $(7.5, -2)$ ,  $(8, 0)$ ,  $(8, 2)$ ,  $(7.5, 4)$ ,  $(7, 6)$ ,  $(8, 6.5)$ ,  $(8.5, 7)$   
 $(8.5, 8)$ ,  $(8, 8.5)$ ,  $(8.5, 9)$ ,  $(9.5, 10)$ ,  $(9, 11)$ ,  $(7.5, 10)$ ,  $(6.5, 10.5)$ ,  $(5.5, 8.5)$ ,  $(5, 8)$ ,  $(5, 6)$

**Shape 11**

$(5.5, 8.5)$ ,  $(5, 9.5)$ ,  $(4, 9.5)$ ,  $(1.5, 10)$ ,  $(-5, 9.5)$ ,  $(-1, 9)$ ,  $(-5, 8.5)$ ,  $(-2, 7)$ ,  $(-3, 7)$ ,  $(-4, 7)$

**Shape 12**

$(1.5, 10)$ ,  $(1.5, 11)$ ,  $(-5, 12)$ ,  $(0, 12.5)$ ,  $(.5, 13)$ ,  $(.5, 14)$ ,  $(-5, 14)$ ,  $(-1.5, 12.5)$ ,  $(-1, 11.5)$ ,  $(-2, 10.5)$ ,  $(-1, 9)$

**Shape 13**

$(-5, 9.5)$ ,  $(-5, 11.5)$ ,  $(-5, 13)$

**Shape 14**

$(-3, 7)$ ,  $(-1, 6.5)$ ,  $(-5, 6)$ ,  $(0, 6)$ ,  $(.5, 6.5)$ ,  $(1, 8)$ ,  $(.5, 8.5)$ ,  $(-5, 8)$ ,  $(-1, 7.5)$ ,  $(-1.5, 7)$ ,  $(-1, 6.5)$

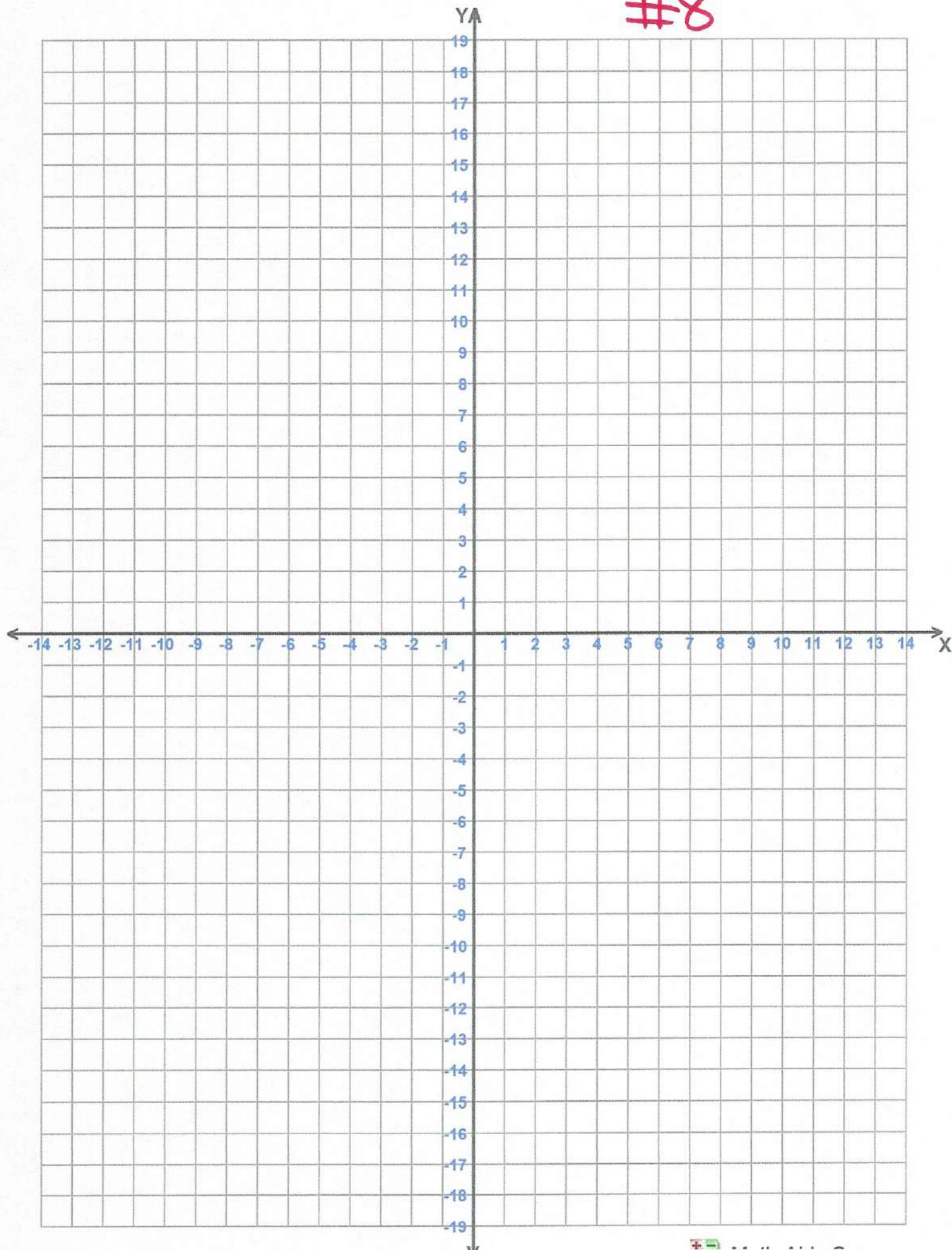
**Shape 15**

$(.5, 6.5)$ ,  $(1, 5.5)$ ,  $(2, 5)$ ,  $(2.5, 5.5)$ ,  $(3, 6.5)$ ,  $(3, 7.5)$ ,  $(2, 8)$ ,  $(1, 7.5)$ ,  $(.5, 6.5)$

**Draw a .5 radius circle around these points.**

$(-5, 6.5)$  and  $(2, 6.5)$

#8





#9

Name : \_\_\_\_\_ Score : \_\_\_\_\_

Teacher : \_\_\_\_\_ Date : \_\_\_\_\_

## Ferb

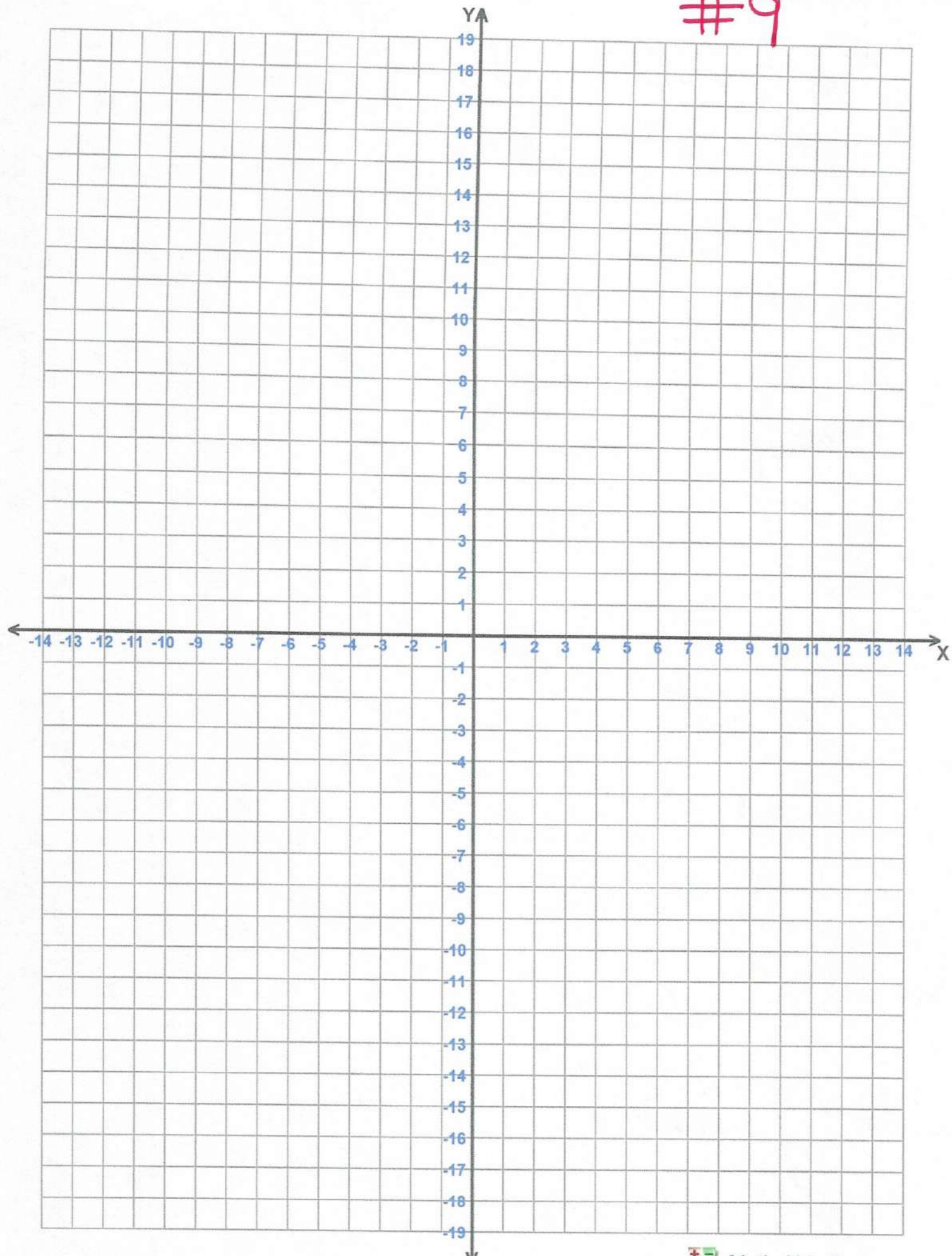
For each Shape plot the ordered pairs on the axis and connect them in order.  
Do not connect the Shapes to each other.

**Shape 1** $(0,-15), (-1,-15.5), (0,-15.5), (2,-16.5), (3,-15.5), (4,-16), (5,-17), (5.5,-18), (-1,-18), (-1,-15.5)$ **Shape 2** $(4,-16), (5.5,-15), (5.5,-14.5), (4,-14.5), (4,-11), (5,-10.5), (3.5,-9.5), (3.5,-6), (4,-5.5), (5,-5), (7,-5), (8,-4.5), (8,-1), (7.5,.5), (6,1), (5.5,1), (4,.5), (2.5,.5), (2.5,2), (2,3), (1,3.5), (0,4), (-1,3.5), (-1.5,3), (-2,2), (-2,1), (-1.5,0), (-1,-.5), (0,-1), (1,-.5), (2,0), (2.5,.5)$ **Shape 3** $(6,1), (6,3), (5.5,4), (5,5), (4.5,5.5), (3.5,6.5), (2,6.5), (1,5.5), (0,4)$ **Shape 4** $(4,-14.5), (0,-15), (-1,-11), (-2,-5), (-3,-4.5), (-4,-4), (-4.5,-3), (-4,-2), (-2.5,-2), (-3,0), (-4,6), (-4,8.5)$ **Shape 5** $(3.5,6.5), (3,8), (5,7), (7.5,6), (5.5,11), (3,12), (5,13), (2,13.5), (-2,11.5), (-4.5,12.5), (-4,11), (-6,11), (-7.5,10), (-5.5,9.5), (-6.5,6.5), (-4,8.5), (-3.5,6.5), (-2,8.5), (1.5,7), (5,8.5), (3,8), (3.5,6.5)$ **Shape 6** $(-2.5,-4), (-3,-4), (-3.5,-3.5), (-3,-3.5), (-3.5,-3), (-3.5,-2.5), (-3,-2.5), (-2.5,-3)$ 

Draw a .5 radius circle around these points.

 $(1.5,1.5)$  and  $(5,2)$

#9





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

Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

Date : \_\_\_\_\_

## Phineas

For each Shape plot the ordered pairs on the axis and connect them in order.  
Do not connect the Shapes to each other.

**Shape 1**

$(-3, -9.5)$ ,  $(-2, -10)$ ,  $(-1, -10)$ ,  $(-.5, -11)$ ,  $(0, -11.5)$ ,  $(.1, -12)$ ,  $(-3, -12)$ ,  $(-4.5, -11.5)$ ,  $(-3.5, -10.5)$ ,  $(-3, -9.5)$   
 $(-3, -8)$ ,  $(-4, -5)$ ,  $(-4.5, -2)$ ,  $(-5, -1)$ ,  $(-6, -1)$ ,  $(-7, -.5)$ ,  $(-7.5, 0)$ ,  $(-7.5, .5)$ ,  $(-7, 1.5)$ ,  $(-6.5, 2)$   
 $(-7, 3.5)$ ,  $(-8, 5.5)$ ,  $(-8.5, 6.5)$ ,  $(-9, 7.5)$ ,  $(-8.5, 8.5)$ ,  $(-7.5, 8)$ ,  $(-5, 6.5)$ ,  $(-3, 5.5)$

**Shape 2**

$(-3.5, -10.5)$ ,  $(-2, -11)$ ,  $(-.5, -11)$ ,  $(-1, -10)$ ,  $(1, -8.5)$ ,  $(3, -6.5)$ ,  $(2.5, -6)$ ,  $(1.5, -5.5)$ ,  $(0, -5.5)$

**Shape 3**

$(3, -6.5)$ ,  $(5, -5.5)$ ,  $(8, -3.5)$ ,  $(11, -2.5)$ ,  $(13, -1.5)$ ,  $(6.5, 1.5)$ ,  $(3.5, 2.5)$ ,  $(2.5, 1.5)$ ,  $(1.5, .5)$ ,  $(0, .5)$   
 $(-1, 1)$ ,  $(-2.5, 2)$ ,  $(-3, 3)$ ,  $(-3.5, 4)$ ,  $(-3.5, 5)$ ,  $(-3, 5.5)$ ,  $(-2, 6.5)$ ,  $(-1, 6.5)$ ,  $(.5, 6.5)$ ,  $(1.5, 6)$   
 $(2.5, 5)$ ,  $(2.5, 5.5)$ ,  $(3, 4.5)$ ,  $(3.5, 3.5)$ ,  $(3.5, 2.5)$

**Shape 4**

$(2.5, 5)$ ,  $(2.5, 6.5)$ ,  $(4.5, 6)$ ,  $(5.5, 5)$ ,  $(6, 4.5)$ ,  $(6.5, 3.5)$ ,  $(6.5, 2.5)$ ,  $(6.5, 1.5)$

**Shape 5**

$(.5, 4)$ ,  $(1, 4.5)$ ,  $(1.5, 5)$ ,  $(2.5, 4.5)$ ,  $(2.5, 3.5)$ ,  $(2.5, 2.5)$ ,  $(1.5, 2.5)$ ,  $(1, 3)$ ,  $(.5, 4)$

**Shape 6**

$(5, 5)$ ,  $(6, 4)$ ,  $(6, 3)$ ,  $(5.5, 2.5)$ ,  $(4.5, 2.5)$ ,  $(4, 3.5)$ ,  $(4, 4.5)$ ,  $(5, 5)$

**Shape 7**

$(-7.5, 8)$ ,  $(-5, 9)$ ,  $(-3, 10)$ ,  $(-5, 10.5)$ ,  $(-6.5, 10)$ ,  $(-5.5, 11)$ ,  $(-4, 12)$ ,  $(-1.5, 12.5)$ ,  $(-4, 13.5)$ ,  $(-5, 13)$   
 $(-7, 12)$ ,  $(-8.5, 10.5)$ ,  $(-8, 13)$ ,  $(-10, 11)$ ,  $(-10, 9)$ ,  $(-11.5, 8.5)$ ,  $(-12.5, 8)$ ,  $(-12.5, 7)$ ,  $(-11.5, 7.5)$ ,  $(-11, 5)$   
 $(-10, 7)$ ,  $(-9.5, 4.5)$ ,  $(-9, 6)$ ,  $(-8.5, 6.5)$

**Shape 8**

$(-7, 1)$ ,  $(-6, -.5)$ ,  $(-5.5, 1)$

**Draw a .5 radius circle around these points.**

$(1.5, 4)$  and  $(5, 4)$

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