Homeschool Projects

Caution: Balloons are fun toys, but can be dangerous like all toys...PLEASE make sure small children do not chew balloons or have access to broken bits. We would like all our kids to grow healthy and happy. I ask you to be responsible like professional balloonist. Adult supervision is recommended.

# Mathematical Symbols

**Material Need: 4-260 twisting balloons.**

This worksheet will help the student to understand basic geometric shapes with regarding to mathematics symbols. The final exercise uses 3-260 balloons to develop a 3 balloon sphere.

1. Inflate a balloon leaving about 1" tail? What geometric curve did the balloon take when inflated?

2. Take the balloon and tie the nozzle to the tail. What shape did you create? What is the numeric value? What letter of the alphabet does it represent?

3. Take the balloon and fold/divide it in half. At the fold, carefully pinch and twist one side of the balloon. This will create two segments. If two lines are above each other, what is its mathematical symbol?

4. If two lines directly above each other and are equal desistance between each other, it is called a _____ line?

5. Take hold of the balloon at the tied nozzle and the opposite twisted section. Bring the balloon together to form an ellipse. The ellipse shape will look like what American/Canadian sport ball?

6. Take the balloon and the tied nozzle and the opposite twisted section and bring the points together. Twist the balloon around each point to create what numeric value?

7. If you turn the newly formed shape counter clock wise to a 45 degree angle and draw an imaginary line in between the two circles. What mathematical symbol or sign would you have?

8. If this was a fraction 0 divided by 0. What is the answer?

9. If you turn the newly formed shape so it represented the number eight and drew an imaginary horizontal line between the 0's. What mathematical sign would you have?

10. If you take the newly formed shape and place it on its side you have what mathematical symbol is created?

Homeschool Projects

## *How to create a balloon sphere using 3-260 balloons*

Start by inflating a balloon 95%, living a small tip at the end of the balloon. Release the nozzle to let out some air from the balloon or burping the balloon. This will prevent the balloon from popping.

Tie the front nozzle to the end tail which creates a big circle. Tie the ends together just like if your tying a knot in your shoe. Repeat these steps and make two more balloon circles. In total you will have three balloon circles.
Take one circular balloon and fold the balloon making two parallel lines. One side is the tied ends, opposite that, is a fold balloon. Grab the folded balloons with your fingers and give it a pinch, and twist, one side of the balloon. This will create two parallel lines or two very large bubbles. They should look like to big lips.

Take the two twist locations on opposite ends and bring them together. Twist the two big circles in opposite directions creating a figure eight. Fold the figure eight in half. The finished product will have to circles lying on top of each other. Place your arm in the circle to prevent the balloon from untwisting.

Take a second balloon circle, repeat the previous process and make a second figure eight. Take this balloon and fold in half to create two balloons lying on top of each other. Now, take the first double circle balloon and insert the second double balloon into the first.

Take the last circle balloon (third balloon) and fold and twist it like the first two, but do not make the figure eight. Looking at the balloon ball as is… You have a double circle stuffed inside another circle. Hold the balloon so you can see through half the inner circle. Take the flatten circle balloon (third balloon) and push it through that hole. This will lock or prevent the circles form coming apart. Wrap the balloon round and pull through the other circle on the opposite side. Tie the nozzle of the beginning of the parallel balloon to the end of the parallel balloon. This will create a circle locking the other two circles together.

**Twisting Tip:**

Balloons animals have some mortal enemies like pins, grass, hot objects and rough play by youngsters.

Lesser know enemies are high humidity and directs sun light. Humidity and sun light break down the latex balloon faster and can make balloon twisting a challenging.

## *Advance Assignment*

Define the following words

- Sphere
- Diameter
- Radius
- Circumference
- Perimeter
- Using the balloon ball you made, calculate the balls circumference.

## *Making a Punch Ball*

Take an uninflated balloon and tie it around one of the balloon ball sections. Take a second balloon and add a puff of air. Add enough air to make the balloon fill, but not expand or stretch. Tie the ends together to form a loop. Attach the loop to the end of the uninflated balloon. Insert your hand in the loop and punch the balloon.