

# Activity Sheet

## Counting M&Ms

NAME \_\_\_\_\_

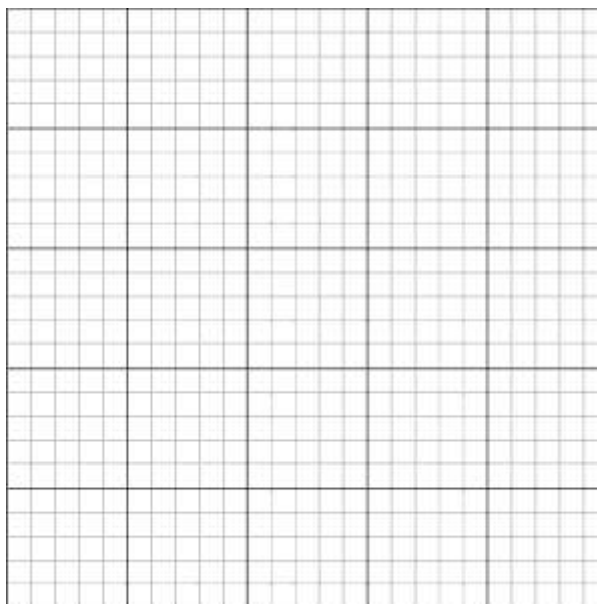
DATE \_\_\_\_\_

- Pour a half-pound bag of M&Ms onto a paper plate so that the candies are one layer thick. You will need to spread the M&Ms to the edges of the plate.
- Remove all the M&Ms that have the M showing on the top side (look closely at the yellow ones because the M is hard to see). Count and record the number of M&Ms remaining and pour them into a container.
- Shake the container and pour these M&Ms back onto the plate. Again remove all the M&Ms with the M showing, record the number remaining, and pour them back into the container.
- Keep repeating this process until all the M&Ms are removed. Use the following chart to record your information. Add additional trial numbers as the experiment progresses.

TRIAL NUMBER	M&MS ON PLATE
1	
2	
3	

Let  $x$  be the trial number and let  $y$  be the number of pieces remaining. Plot all points  $(x, y)$  and analyze the data.

1. What category of function can be used to approximate the data?
2. Find the equation for a function that approximates the data. Graph the function over your scatter plot.



# Activity Sheet

## Balloons and Breaths

NAME \_\_\_\_\_

DATE \_\_\_\_\_

- Select one person to inflate the balloon, one breath at a time.
- A second person measures the circumference at the widest point of the balloon, in centimeters, after each breath.
- A third person records the data in the table below.

Each breath should contain about the same volume of air. In addition, a breath should not be so large that the balloon reaches its capacity in just two or three breaths. You may want to practice before gathering the data.

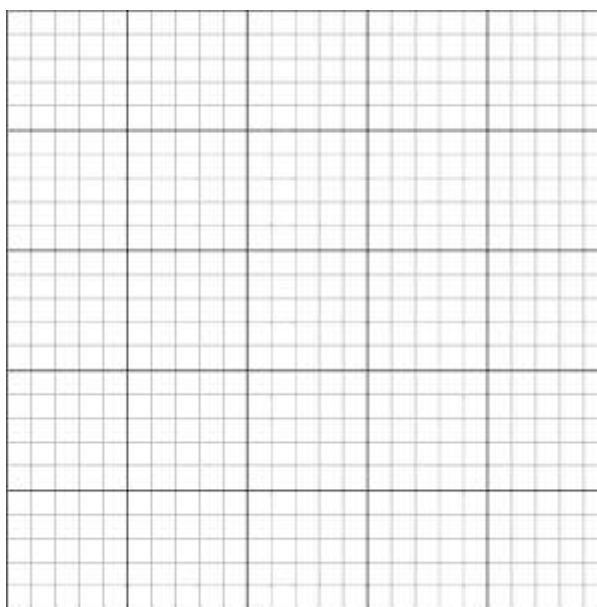


NUMBER	(IN CM)
1	
2	
3	

	CIRCUMFERENCE
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Let  $x$  be the breath number and let  $y$  be the circumference. Plot all points  $(x,y)$  and analyze the data.

1. What category of function can be used to approximate the data?
2. Find the equation for a function that approximates the data. Graph the function over your scatter plot.







# Activity Sheet

## Weather Patterns

NAME \_\_\_\_\_

DATE \_\_\_\_\_

Most years have 365 days. The first day of the calendar year is 1 January, 15 January is the 15th day of the calendar year, 1 February is the 32nd day of the calendar year, and so on. Determine whether a relationship exists between the number of the day of the year and the normal high temperature for that day for the first and fifteenth days of each month. Use weather data from your local area.

DATE	DAYS SINCE NEW YEARS	HIGH TEMP (FAHRENHEIT)
Jan 1	0	
Jan 15	15	
Feb 1	32	
Feb 15	46	
Mar 1	60	
Mar 15	74	
April 1	91	
April 15	105	
May 1	121	
May 15	135	
June 1	152	
June 15	166	
July 1	182	
July 15	196	
Aug 1	213	
Aug 15	227	
Sept 1	244	
Sept 15	258	
Oct 1	274	
Oct 15	288	
Nov 1	305	
Nov 15	319	
Dec 1	335	
Dec 15	349	

Let  $x$  be the number of the day of the year and  $y$  be the normal high temperature on that day. Plot all ordered pairs  $(x, y)$  and analyze the data.

1. What category of function can be used to approximate the data?
2. Find the equation for a function that approximates the data. Graph the function over your scatter plot.

