

Create and Invent

Math Whiz



Math is used everywhere: to make change, follow a recipe, build a table, figure out how far it is to the next town—even to the next galaxy! Become a math whiz and you can do anything. Complete six of the following requirements.

1. **Math Hunt**

How many daily examples of math can you and your friends think of? There are checkbooks to balance, measurements to use for recipes, tips to calculate, grocery charges to add. Set a timer for three minutes. Who can think of the most math-related daily activities?

2. **Your Numbers Are . . .**

Measure yourself in five different ways. The length of your arm or leg, the length of your stride, and the amount of cereal you put in your bowl are just a few of the ways you add up. Come up with your own! See the chart to the right to convert your measurements into metric.

METRIC TO ENGLISH	
Metric	English
Centimeters (cm)	.39 = inches
Meters (m)	3.3 = feet
Meters (m)	1.1 = yards
Kilometers (km)	.6 = miles
Hectares (ha)	2.5 = acres
Liters (l)	1.1 = quarts (1q)
Cubic meters (m3)	284.2 = gallons
Grams (g)	.04 = ounces (avdp)
Kilograms (kg)	2.2 = pounds (avdp)
Kilowatts (kW)	1.3 = horsepower

3. **Shape Up**

Look for geometric shapes around your home, school, playground, or other area. You can check floors, walls, doors, windows, leaves, flowers, or other items. Find out the names of the shapes you don't already know.

4. **Calculate Your Flight Time**

Choose a destination that you would like to visit anywhere in the world. Using a world map with a distance key, figure out how far the place is from your hometown. How long would it take you to drive there? Fly there?

5. **Make it count**

Can you tell how many jelly beans are in a jar without counting every one? Have an adult or older friend fill a jar with jelly beans or other small candies. Make sure she carefully counts how many are put in, records the number, and keeps it somewhere safe (no peeking). Then you and your friends try to guess the number in the jar. How did each of you come up with your number? What's the correct answer? Who was closest?

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6. **Make a Math Puzzle**

Draw a square divided into nine equal spaces (3x3). Put a penny on each square (nine pennies). Two players take turns removing one penny at each turn. A player must always leave at least one penny in each row or column. The player who takes a penny that makes a column or row empty, loses. Play at least 10 games. Try to discover a strategy for winning the game.

7. **Predictions**

Make a prediction, such as, “I think that between 2:00 and 3:00 p.m., one out of every five people walking down the street will be wearing jeans.” Make a plan to check your prediction. Then carry it out. Compare your prediction with the results.

8. **Make Your Own Code**

Assign the letter “A” a number value. If A=7, B would equal 8, E would equal 11, and so on. Write out a secret message for a friend, using equations to substitute for each letter. For example: If A=7, E=11, L=18, and P=22, you could spell out the word “apple” by writing $3+4$, $10+12$, 2×11 , $23-5$, $22/2$. Send your friend a message and see if she can unravel your meaning. Don’t forget to share the key to the code with her!

9. **Scale It**

Visit a playground and measure or estimate the height, length, and width of several pieces of equipment. Then, using what you have learned, create a model, or drawing of it. Decide what your scale will be and note it on your model.

10 **Just the Stats**

Pick your favorite sport and find five examples of how math principles are used in the game.

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