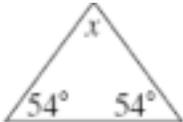
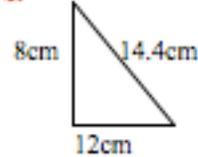


Summer Math Activities for Students Entering 7th Grade - June

<p>1. Find a shoebox (or any other rectangular prism). Measure all the sides in inches. Find the total surface area of all 6 sides.</p>	<p>2. How many different desserts can you create with: 3 ice cream flavors, 2 types of sauce, and two kinds of sprinkles? Each dessert must have 1 ice cream flavor, 1 sauce, and 1 sprinkle.</p>	<p>3. I have a machine that adds 16 to every number I put in. If 172 comes out, what number did I put in? If 111 comes out, what number did I put in? If x is any number, write an expression to model what the machine does.</p>	<p>4. Ms. Math asked her students to turn their books to the facing pages whose page numbers add up to 85. To which pages should the children turn?</p>	<p>5. Roll two dice together and multiply the product. Record the product. Do this 25 times. Find the mean, median, range, and mode of the products.</p>	<p>6. Find a one-quart bottle and a one-liter bottle. Using real liquids, figure out which holds more. About how much more is it?</p>	<p>7. Go to: http://illuminations.nctm.org/Activity.aspx?id=4095 Find the volume and surface area of rectangular prisms.</p>
<p>8. Change the following improper fractions into mixed numbers and plot them on a number line:</p> $\frac{13}{7} \quad \frac{11}{3} \quad \frac{21}{4} \quad \frac{101}{20}$	<p>9. About how many miles is it from your house to Nogales? If you were driving an average of 50 miles per hour, how long would it take to get there?</p>	<p>10. Find the missing angle measure and name the triangle.</p> <div style="text-align: center;">  </div>	<p>11. If you have \$5 in your pocket, and will earn \$4 for each hour you babysit, how many hours do you need to babysit in order to have enough money to buy a \$20 shirt?</p>	<p>12. Six nickels is what percent of one dollar?</p>	<p>13. A board that is 8 feet 4 in. long is cut into 5 pieces of equal length. How long is each piece? What if it was cut into 4 pieces instead, how long would it be?</p>	<p>14. Frank ran 16.5 miles last week. He ran 7 1/4 miles on Monday and the rest on Friday. How many did he run on Friday?</p>
<p>15. A theater has 50 rows of 65 chairs and a balcony with 20 rows of 35 chairs. It was sold out except for 3 rows in the balcony and one seat in all the other rows, how many people attended the play?</p>	<p>16. Are all of these expressions equivalent? How do you know?</p> $4m+8$ $4(m+2)$ $3m+8+m$ $2+2m+m+6+m$	<p>17. I bought one shirt for \$27.25 and another for \$18 less than the first one. I bought a third shirt for \$22.50 more than the first. How much did I pay for all 3 shirts?</p>	<p>18. Find a chocolate chip cookie recipe and imagine that you were to cut the recipe in half. Write a new ingredients list with the new amounts of each item.</p>	<p>19. Which has the fastest rate - doing 100 jumping jacks in 8 minutes or doing 30 push-ups in 2.5 minutes? How do you know?</p>	<p>20. Find the area of a closet in your bedroom (or another room in your house). Now find the area of the entire room and calculate what fraction of the room is the closet.</p>	<p>21. Go on a 3-D scavenger hunt. Take pictures of the various cylinders, pyramids, cubes, rectangular prisms, and cones you can find in 10 min.? Create an 8 x 11.5 collage of the 3-D figures you found.</p>
<p>22. Play a math thinking game like Yahtzee, Mastermind, or Battleship</p>	<p>23. A man has to be at work by 9:00 a.m. and it takes him 15 minutes to get dressed, 20 minutes to eat and 35 minutes to walk to work. What time should he get up?</p>	<p>24. Go to: http://www.dr-mikes-math-games-for-kids.com/alices-cross-number-puzzle.html and check out Alice's cross number puzzle! You'll need a calculator.</p>	<p>25. Using all four of the digits 5, 6, 7, and 9, any of the four operations, can you make the number 24? Can you make 36?</p>	<p>26. What is the area of a trapezoid with bases of 3 in. and 8 in. and a height of 3 in.?</p>	<p>27. What three even numbers add up to 54? How many different answers can you find? What patterns do you see in your answers?</p>	<p>28. Go to: http://figurethis.nctm.org/ and complete Challenge #8, #10, or #14 from the Challenge Index.</p>

Summer Math Activities for Students Entering 7th Grade - July

<p>1. Express the following numbers using exponents: 100, 49, 169, 36, 8, 32</p>	<p>2. As of today's date, what percentage of the games have the Phoenix Diamondbacks won so far this season? What percentage have they lost?</p>	<p>3. Write an expression for the 2-step rule illustrated in the table?</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Input</th> <th style="padding: 5px;">Output</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">5</td> <td style="padding: 5px;">16</td> </tr> <tr> <td style="padding: 5px;">9</td> <td style="padding: 5px;">28</td> </tr> <tr> <td style="padding: 5px;">7</td> <td style="padding: 5px;">22</td> </tr> <tr> <td style="padding: 5px;">10</td> <td style="padding: 5px;">31</td> </tr> </tbody> </table>	Input	Output	5	16	9	28	7	22	10	31	<p>4. Frank drank 2 quarts of powerade and 2 pints of water at the soccer game. How many more ounces does he need to drink to make a gallon of liquids?</p>	<p>5. Find the area and perimeter of the triangle below.</p> 	<p>6. If you spend \$25 per day, how long will it take you to spend \$1,000.00</p>	<p>7. The perimeter of a square is 73 inches. What is the length of each side?</p>
Input	Output															
5	16															
9	28															
7	22															
10	31															
<p>8. Dad bought 7 pounds of jellybeans. He paid \$55.65 for them. What was the cost per pound?</p>	<p>9. Play a board game that uses mathematical thinking like Chess, backgammon, SET or Mancala.</p>	<p>10. What is the sum of each pair of values?</p> <p style="text-align: center;">$\frac{5}{6}$ and $\frac{3}{8}$</p> <p style="text-align: center;">$\frac{3}{4}$ and $\frac{6}{7}$</p>	<p>11. Find the difference between 203.45 and 12.345.</p>	<p>12. Dad bikes 38 kilometers every day of the week. How many km does he bike in three and a half weeks?</p>	<p>13. I used two-thirds of a 3 ½ pound bag of cherries for a pie. How many pounds of cherries did I use?</p>	<p>14. If the vet examined 14 dogs and 11 birds in one day, how many eyes did he look at? How many feet did he see?</p>										
<p>15. If 310 children and 45 adults are going on a field trip, how many buses do they need? Each bus can seat 55 people. How many empty seats will there be?</p>	<p>16. Multiply:</p> <p>23 x 100 66 x 1,000 734 x 0.01 2,389 x 0.001</p> <p>What patterns do you see in the answers?</p>	<p>17. I sold three-fourths of my cookies for 75 cents each. I had 3 dozen cookies. How much money did I make?</p>	<p>18. Make a Venn Diagram for a rhombus and a parallelogram. What properties should go in the overlapping section?</p>	<p>19. A movie theater is showing the film "I LOVE MATH". The film is 2 1/5 hours long. If the theater has 5 showings each day, then what will be the total number of hours the film will be shown during a week?</p>	<p>20. How many minutes are in 1 hour? How many seconds in 1 hour? How many minutes in 1 day? How many seconds in 1 day?</p>	<p>21. Look up the temperature for the last 7 days. What is the maximum? The minimum? The range? The mean? Is there a mode?</p>										
<p>22. Farmer Bob put a square fence around his garden to keep out the deer. One side was 10m in length. If the posts were placed 2m apart, how many posts did he use?</p>	<p>23. When I interviewed 100 6th graders, 81 said they liked peanut butter sandwiches, 75 liked jam sandwiches, and 70 liked both. How many students liked neither? *Use a Venn Diagram</p>	<p>24. Multiply</p> $4\frac{2}{3} \cdot 6\frac{3}{4}$	<p>25. If you bought 3 CDs, each costing \$12.99, and paid with a \$50 bill, what would your change be? (Bonus: If you had to pay 6% sales tax also, what would your change be?)</p>	<p>26. Go to: http://figurethis.nctm.org/ and complete Challenge #21, #23, or #30 from the Challenge Index.</p>	<p>27. Simplify</p> $4 \cdot 8 \div (8^2 \div 4^2)$	<p>28. How many groups of 25 are there in 500? How many 20's are there in 6,000?</p>										