



Speed Math 7th/8th

1	Evaluate: $108 \div 36$
2	Find the sum of the number of sides on a pentagon and the number of sides on a rhombus.
3	What is the next term in the following sequence: 2, 3, 7, 16, 32, ...?
4	What is the area of a rectangle with side lengths 16 and 24?
5	Evaluate: $\frac{1}{7} + \frac{5}{6}$
6	What is the area, in square feet, of a triangle with base length 14 feet and height 7 feet?
7	If $x = 23$, what is the positive difference between $3x + 19$ and $5x - 3$?
8	Simplify: $\sqrt{180}$
9	If $a = 5$, $b = 4$, and $c = 13$, what is the value of $a - (b + c)$?
10	What is the sum of the first five positive integers?
11	Each saltine cracker has 12 holes. How many holes are in 13 crackers?
12	Evaluate: 49×51
13	What is the positive difference between 2^6 and 3^4 ?
14	Tabitha looks at the clock and notices that it is 10:01, which is a palindrome (it reads the same forwards and backwards). In how many minutes will the next palindromic time occur?
15	A right triangle has one leg of length 3 units and a hypotenuse of length 5 units. What is the length of the other leg?
16	How much wood, in cubits, could a wood chuck chuck in an hour if two wood chucks could chuck 3 cubits of wood per minute?
17	Evaluate: $2 + 4 + 6 + 8 + 10 + 12 + 14 + 16 + 18$
18	Sandra rolls an icosahedral die with twenty faces numbered with the integers from 1 to 20. What is the probability that she rolls an even number?
19	A colony of bacteria doubles in population every two hours. If there are originally 16 bacteria, after how many hours will there be 256 bacteria?
20	What is the prime factorization of 108?
21	What is the numeric difference between the perimeter and the area of a rectangle with dimensions 6 and 9?

22	A quadrilateral has interior angles that form an arithmetic progression. If the smallest angle measures 72° , what is the measure, in degrees, of the next smallest angle?
23	If two standard six-sided die are rolled, what is the probability of rolling a sum of seven?
24	There are 100 calories in a tablespoon of peanut butter and 100 calories in a slice of bread. Renee makes a peanut butter sandwich with two slices of bread and calculates that it has 500 calories. How many tablespoons of peanut butter did she use in the sandwich?
25	A square has an area of 9 square inches. If each side is doubled in length, what is the new area of the square, in square inches?
26	Britta's calculator is malfunctioning. Whenever she tries to add two numbers, the calculator finds the product instead. Whenever she tries to multiply two numbers, the calculator finds the sum instead. What is the output when she tries to calculate $2 \times (3 + 5)$?
27	What is the integer closest to $\sqrt{40}$?
28	What is the slope of the line defined by the equation $9y - 4x = 2$?
29	What is the perimeter of a regular hexagon formed from six equilateral triangles that each have a perimeter of 18?
30	Let the digit square of a number be defined as the sum of the squares of the digits of the number. For example, the digit square of 12 is $1^2 + 2^2 = 5$. What is the digit square of the digit square of 2012?
31	What is the area of an equilateral triangle with side length 8?
32	Joey is making a scale map of his house. He has determined an appropriate scale to be two inches on his map to each real foot. If a room in his house is 360 square feet, how big is it, in square feet, on his map?
33	What is the sum of the odd numbers from 10 to 30?
34	Find the mean of the following data set: {5, 3, 8, 1, 7, 1, 3}.
35	Find the units digit of 2^{20} .
36	The product of two positive integers is 153, and they differ by 8. What is their sum?
37	Mr. Murphy assigns his class to follow two of nine different motifs in a book. How many ways can students choose two motifs to follow?
38	Two competing math teams, each composed of four people, meet for a competition. Each member of the first team shakes the hand of each member of the second team. Each member of the first team, being more formal, shakes the hand of each of his or her teammates as well. How many total handshakes take place?
39	What is the sum of the solutions to the equation $ 1 - x = 1$?

40	How many ways are there to rearrange the letters in the word "JAVA"?
41	A dartboard is made of three concentric circles of radius 1, 3, and 5 inches. If Martin throws a dart, what is the probability that it lands within the circle of radius 3 but outside the central circle? Assume the dart hits the board.
42	Triangle ABC has an area of 6. The median from A meets BC at D . What is the area of triangle ABD ?
43	Arnold randomly draws a card from a standard 52-card deck. What is the probability that it is red or a king?
44	What is the least possible product of three distinct numbers from the set $\{-\frac{1}{2}, -\frac{1}{3}, 2, 4, 5, 9\}$?
45	What is the volume of a cone with a slant height of 10 and a base radius of 6?
46	The medians AD , BE , and CF of triangle ABC meet at point G . If the area of ABC is 18, what is the area of quadrilateral $AFGE$?
47	Which of the following values is the greatest: $\sqrt{3}, \frac{3}{2}, \frac{9}{5}, \frac{\pi}{2}$?
48	A function is defined as $f(2x) = 3x + 5$. What is the value of $f(6)$?
49	In base 7, what is the value of $2046_7 + 512_7$?
50	Several numbers are plotted on the number line below. Which point could represent the difference $A - B$? 