



Knights of Pi Math Tournament – May 16, 2009

Speed Math 5th/6th

1	What is the sum of 145 and 81?
2	Find the difference: $42 - 29$
3	What is the area, in square inches, of a rectangle with length 7 inches and width 8 inches?
4	Evaluate: 13×8
5	Evaluate the product: 36×5
6	Find the quotient: $45 \div 5$
7	Find the product of 326 and 4.
8	Evaluate: $84 \div 7$
9	Evaluate the quotient: $42 \div 3$
10	What is the area, in square meters, of a rectangle with length 12 meters and width 5 meters?
11	Evaluate: 4^3
12	Evaluate: $(4 + 5) \times 2^2 - 15$
13	What is the perimeter, in centimeters, of a rectangle with length 13 centimeters and width 24 centimeters?
14	Find the sum: $2.7 + 3.45$ (<i>Express your answer as a decimal.</i>)
15	What is the area, in square feet, of a triangle with base 8 feet and height 12 feet?
16	What is 30% of 80?
17	Evaluate: $\frac{1}{3} + \frac{2}{5}$ (<i>Express your answer as a common fraction.</i>)
18	How many degrees are in the smaller angle between the hands of a 12-hour clock at 3:00?
19	If a point starts at (3, 1) and moves two units up and four units to the right, what are its new coordinates?
20	If there are 3 mL of juice in a 7 mL drink, how many pints of juice are there in 42 pints of the same drink?
21	What is the volume, in cubic inches, of a right rectangular prism with length 12 inches, width 4 inches, and height 10 inches?
22	If $x = 8$, what is the positive difference between $2x + 20$ and $4x - 4$?
23	If it is 6:32am, what time will it be 5 hours and 47 minutes from now?

24	Evaluate: $-18 \div 6 - 3$
25	Find the range of the following set of numbers: {6, 8, 4, 2, 10, 3}
26	Evaluate: $5 + 13 \times -4$
27	Evaluate: $5 \div \frac{4}{7}$ (Express your answer as a common fraction.)
28	Find the median of the following set of numbers: {10, 8, 6, 3, 15, 11, 7}
29	Identify the mode of the following set of numbers: {7, 4, 3, 6, 4, 5, 5, 3, 4}
30	What is the 15 th digit after the decimal point in the repeating decimal 0.47314731 ...?
31	Evaluate: $\frac{1}{7} - \frac{1}{9}$ (Express your answer as a common fraction.)
32	Evaluate: $\frac{2}{3} \div \frac{5}{4}$ (Express your answer as a common fraction.)
33	Compute the arithmetic mean of the following set of numbers: {3, 6, 1, 8, 4, 2}
34	Evaluate: 2.7×1.3 (Express your answer as a decimal.)
35	What is 24% of 60? (Express your answer as a decimal.)
36	If on a given day, the probability of rain is 60%, what are the odds against rain on that day? (Express your answer as a ratio $a : b$ in simplest form.)
37	What is the positive difference between $\frac{1}{6}$ of 3 and $\frac{2}{7}$ of $2\frac{1}{3}$? (Express your answer as a common fraction.)
38	If you roll a fair 6-sided die with faces numbered 1 to 6 and a fair 5-sided die with faces numbered 1 to 5, what is the probability of rolling both an odd number on the 6-sided die and an even number on the 5-sided die? (Express your answer as a common fraction.)
39	If there are 2 mL of sugar in a 6 mL solution, how many liters of sugar are in 76 liters of the same solution? (Express your answer as a decimal rounded to the nearest tenth.)
40	What is the value of $0.375 + 0.4$? (Express your answer as a common fraction.)
41	If $3x = x + 8$, what is the value of x ?
42	If $2x + 4 = 3x - 2$, what is the value of x ?
43	What is the slope of the equation $3x + 2y = 10$?
44	If $\frac{x}{2} = 2x - 3$, what is the value of x ?
45	What is the slope of the equation $5x - 3y = 35$?
46	What are the coordinates of the y-intercept of the equation $2x + 5y = 25$?
47	What are the coordinates of the x-intercept of the equation $4x + 3y = 12$?

48	What is the distance between the y-intercepts of the line with the equation $y = 2x + 3$ and the line that goes through the point $(4, 2)$ and has a slope of -1 ?
49	If $ x - 7 = 1$, what is the product of all possible values of x ?
50	If a book's price starts at \$10, is increased by $x\%$ to \$12.50, and then is decreased by $y\%$ back to \$10, what is the value of $x - y$?
51	$(x^2)^3 = \frac{1}{64}$, what is the value of x ? (<i>Express your answer as a common fraction.</i>)
52	Express $\sqrt{54}$ in simplest radical form.
53	What is the length, in inches, of the hypotenuse of a right triangle with leg lengths 12 inches and 5 inches?
54	If $5x + 2y = 30$ and $2x + 5y = 33$, what is the value of $x + y$?
55	If the price of a stock is \$10 on January 1 st , 2007, and each January 1 st its price is 10% higher than the previous January 1 st , what is its price on January 1 st , 2009?
56	What is the measure, in degrees, of any exterior angle of a regular decagon?
57	What are the coordinates of the intersection of the lines $3x + 2y = 9$ and $2x + 3y = 6$?
58	What is the length, in meters, of a diagonal of a rectangle with area 60 meters ² and side lengths x meters and $x + 7$ meters?
59	What are the coordinates of the midpoint of the line segment between $(2, 7)$ and $(10, 3)$?
60	If there are 5 red marbles, 8 blue marbles, and 6 green marbles in a bag, what is the probability of drawing one blue marble and then one green marble without replacement? (<i>Express your answer as a common fraction.</i>)