



Knights of Pi Math Tournament – Jan. 7, 2017

Mental Math 7th/8th

Person 1

1	Evaluate $12 + 15 + 18 + 21 + 24$
2	What is the hypotenuse of a right triangle with one leg of length 6 and an area of 24?
3	Calculate the area of a square with side length 17.
4	How many ways are there to arrange the letters in the word Newport, N-E-W-P-O-R-T?
5	If it takes Bob 10 minutes to read 15 pages of a book, how many minutes would he need to finish a book that contains 240 pages?

Person 2

1	Calculate the area of the right triangle with two legs 12 and 18.
2	Robert has 5 dollars. A pencil costs 45 cents. What is the maximum amount of pencils Robert can buy?
3	It takes 5 pounds of meat to make 12 hamburgers. How many pounds of meat is needed to make 108 hamburgers?
4	Evaluate two to the eighth power.
5	A pizza restaurant has choices of 4 toppings, 3 sauces, and 3 side drinks. Bob wants a pizza with 1 topping, 1 sauce, and 1 side drink. How many combinations can he make?

Person 3

1	Evaluate three to the fifth power.
2	How many ways are there to arrange the letters in the word R-O-Y-A-L-E?
3	Evaluate $100 + 121 + 144 + 169$
4	What is the units digit of 3 to the 129th power?

5	What is the volume of a cube with side length 5?
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Person 4

1	Evaluate six to the third power.
2	What is the volume of the rectangular prism with side lengths of 6, 8, and 12?
3	Evaluate $26 + 31 + 36 + 41 + 46 + 51$
4	How many more ways are there to arrange the word random, R-A-N-D-O-M, than chaos, C-H-A-O-S?
5	Calculate the area of a right triangle with side lengths 5 and 12.