

6th Grade Ciphering

Vestavia Hills High School 2010

Round 1

1. $10 \times (5 - 2)^2 + 12 \div 3$
2. Brandon has $\frac{1}{3}$ chance of falling asleep in Math, and a $\frac{9}{10}$ chance of falling asleep in History. What is the probability that Brandon stays awake during both classes?
3. Tia made $3\frac{1}{2}$ dozen cookies. If Kelle ate 14 cookies and Sasha ate the rest, what fraction portion of the original quantity of cookies did Sasha eat?
4. What is 20% of 34% of 50?
5. What is the area of a circle if the diameter is 26?

Round 2

1. A number is divided by three, multiplied by 24, and then divided by 8. The outcome is equal to 120. What is the number?
2. Solve for S given $S = \frac{2}{3} \times \frac{4}{5} \times \frac{6}{7} \times \dots \times \frac{10}{11}$
3. A pair of six-sided dice is rolled and the sum is recorded. What is the probability that this sum is a multiple of 2?
4. Triangle A has side lengths 9, 40, and 41. What is the area of a triangle with double the side lengths of triangle A?
5. Adarsh reset the time on a clock showing 3:55. By rotating the minute hand 4140° . What was the new time?

Round 3

1. Find the value(s) of x? $|x - 12| = 15$
2. Mr. Taylor is knitting a scarf for his dog. If he knits 12 mm per minute, how many cm long could her scarf be in 2 hours?
3. A group of 5 kids are comparing their heights. Soojin is shorter than Jerry but taller than Sasha. Daniel is taller than Sasha but not as tall as Andrew. Andrew and Jerry always fight about who is taller, but they make fun of Daniel for being shorter than a girl in the group. Who is the second shortest?

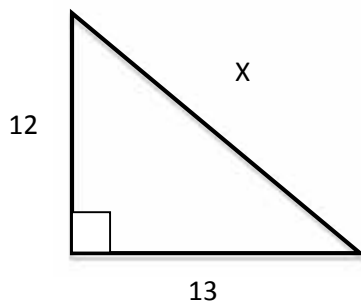
4. Solve: $(17^2 + 6^3 + 3^2 - 5^4)^0$
5. What is 326_7 in base 10?

Round 4

1. Two cups of flour are needed for half a dozen cupcakes. How many cups of flour are needed for 35 cupcakes? (Write answer as a mixed number)
2. What is the sum of all the two digit primes that begin with an eight or a seven?
3. How many ways can Jerry distinctly arrange 8 books on a shelf if there are 3 Lord of the Flies books and 2 Huckleberry Finn books?
4. Compute $3\overline{17} + 4\overline{25}$
5. Danni rode her scooter at a rate of 3 meters per second. She is going to the park, which is 90,000 cm away. How long in minutes did it take her to get to the park?

Round 5

1. A square has a side length of 45 cm. How many square meters is its area?
2. Jackson went to Taco Bell. He has 3 choices of meat, 4 choices of cheese, and 2 choices of a taco shell. How many different tacos can he make if he can only choose one of each?
- 3.



Solve for X.

4. Solve for x: $\frac{13}{16} + \frac{3}{4} + x = 1$
5. If $A \star B$ means $\frac{A(\frac{A}{B} + \frac{B}{A})}{B}$ find $5 \star 4$

Extra: Solve: $\sqrt{36} + \sqrt{64} + \sqrt{(36 + 64)}$