

Algebra – 6th Grade

- 1) The winner of a race ran the distance in 45 seconds at an average speed of 9.6 meters/second. The runner who finished last completed the race in 48 seconds. What was the last runner's average speed?
- 2) Betsy loves cake so much that on the first day she only eats 20% of her personal birthday cake. On the second day she eats 20% of what is left. If she keeps doing this, what percent is left after five days (round to the nearest whole percent)?
- 3) Annie wants to take her little sister Emily and some of her friends to the movies to celebrate Emily's birthday. She wants to buy herself, Emily and her friends one of everything on the list below, but only has \$100.00 to spend. How many friends can Emily invite if she wants to stay within her budget of \$100.00?
Admission: \$8.00
Popcorn: \$3.50
Soda: \$2.25
Candy: \$1.75
- 4) The ratio of two numbers is 7:3. The sum of these two numbers is 30. What is the positive difference of these two numbers?

- 5) Write an equation in the form $y = mx + b$ for the following table.

x	-8	10	6	0	-2	22
y	-2	11.5	8.5	4	2.5	20.5

- 6) If $a*b$ means $\frac{a+b}{a \times b}$, find the value of $5*(4*3)$.
- 7) After a basketball game, each of the seven players from the Huskies wants to give one "high five" to each of the 7 members of the opposing team and to their own teammates. How many high fives will occur after the game?
- 8) Kai, Paulus, and Judy made \$2520 for painting a house. Kai worked 30 hours, Paulus worked 50 hours, and Judy worked 60 hours. They divided the money in proportions to the number of hours worked. How much money did Paulus earn?
- 9) Moses has \$23,560 in his bank account on January 1st. On the first day of each month (beginning in February), he withdraws half the amount of money in his bank account. On the 15th day of each month (beginning in January), his mother deposits \$1200 in his account. How much money will be left in his account on May 31st?
- 10) At a motorcycle and four-wheeler off road race one girl counts 80 wheels while peeking under the track's fence. Her friend tries looking over the fence only to see the tops of 35 helmets. How many four-wheeler racers were in the race?