



1	A snail is climbing a ladder. Every day he climbs 5 centimeters and every night he falls 8 centimeters. What is the minimum distance above the bottom of the ladder that he must start at if he wants to stay on the ladder for 5 days and 5 nights?
2	If $x + \frac{1}{x} = 5$, what is $x^4 + \frac{1}{x^4}$?
3	If $9x^2 + 54x + 81 = 0$, find all possible values of x .
4	What is the cube root of the product of 56, 49, and 64?
5	Find the sum of the reciprocals of A and B if their product is 7 and their sum is 28.
6	The population of Petersville grows by 20% every year. If its population is 1,728,000 in 2014, what was its population in 2010? Round to the nearest whole person.
7	Solve the following system of equations for x : $3x + y = 51$ $7x - 5y = 12$
8	Mike received money from his parents. He gave 50% away to his friend Joe, and then gave 75% of what remained to his sister. He now has 10 dollars. How much money did Mike receive from his parents?
9	An hour after departing, a train meets an accident which detains it for a half hour, after which it proceeds at $\frac{3}{4}$ of its former rate and arrives at its destination 3.5 hours late. Had the accident happened 90 miles further along the line, it would have arrived only 3 hours late. What was the length of the trip in miles?
10	What is the area of the region bounded by the coordinates (2,7), (-4,1), and (4,-1)?