

1.a) On a logarithmic scale , base 10, what would be the number halfway between ten and one thousand?

b) What is 4.75×10^{-23} divided by 3.65×10^{-25} ?

a) _____

b) _____

2. You are storing a sack of potatoes in your basement, next to a sack of onions. Water is evaporating from the onions and the potatoes are sucking it up. Your potatoes started out at 98% by weight water. Now they are 98.5% water. How much do they weigh now, if they started out as a 50 pound sack.

3. Donna is 2 times as old as Mike was 5 years ago when Donna was 20 years older than Mike is now. How old are they now?

Mike _____

Donna _____

4. Give an example of a graph that starts out decreasing and concave up, then, still decreasing becomes concave down, and finishes out concave up and decreasing.

5. Two phone companies A and B offer monthly packages. Company A is 24.50 dollars for the first 200 minutes then 40 cents a minute for each minute over 200. Company B's offer is 39.50 for the first 250 minutes, and then 20 cents a minute after that. What is the smallest number of minutes for you to use for company B to be the better deal?

6. Describe the cost per month function for $C(x)$ company A above, where x is the number of minutes used. (This will have two parts: the less than 200 part will be one part. The over 200 will be the second part.)

7. In an adult condominium, The George W Acres, $\frac{3}{4}$ of the women are married to $\frac{5}{9}$ of the men. Except for married couples, the rest of the apartments are single occupancy. What portion of the residents of the condominium are single? -----

8. What is the smallest number of apartments that this complex can have? -----

9. Very briefly. Why does the finger method for the 9 times table work? -----