McBee High School Learning Packet

Dates: 3/23– 4/3	Thematic Topic: The COVID-19 Pandemic	Subject: Algebra 2	Materials: Pencil and Paper
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Essential Concepts: A2.ACE.1*, A2.ACE.3, A2.AREI.7, A2.FBF.1 **Create and solve equations and inequalities in one variable that model real-world problems involving linear, and exponential relationships. Interpret the solutions and determine whether they are reasonable.**			
Assignment Steps:	- **Solve each of the following word problems. Show all work and box in answers.** - **Design and solve three of your own word problems. Be creative tie the word problems into your current situation (food supply, daily routine, etc.)**		
If you want to receive any extra practice or explore some of the topics beyond what we have done in class, I have enrolled every student into a Khan Academy course. Feel free to email me for more info as well as your personal username and password that I created.			

Students, here is your situation:
You find yourself in the grocery store shopping for necessities in order to self-quarantine when you notice a very unusual shopper. A man has bought all the bananas in the store. You know people have been buying in bulk, but this is unusual. Naturally, this piques your curiosity. You decide to keep an eye on him and see where this leads. As you keep a watchful distance, your mathematical mind goes to work:

Bananas cost about $0.50 each. You estimate there to be 350 bananas in the cart. How much will this unusual purchase cost?

In the checkout line, the man is paying for his bananas with two coupons. The first coupon reduces the price by 10%. The second coupon allows him to pay 85% of the reduced price. How much will he pay after coupons if the original price is $175?

You follow banana man to a van overflowing with bananas. You estimate there to be 1,400lbs of bananas. 60% of bananas are edible fruit. Using this information, calculate the weight of the fruit and the peels inside the van.

You follow banana man as he drives away from the store. You both drive at a constant speed of 35mph through town until he begins to pick up speed. You suspect a banana is stuck on the gas pedal. Using your own speedometer and clock, you see that he is moving at a speed of 60mph after one minute. How long will it take him (and his bananas) to reach a speed of 200mph?

A banana contains about 422mg of potassium. The daily recommendation for potassium intake is 4.7g. How many days would the man meet that recommendation with his 350 bananas?

You finally discover that to achieve social distancing and daily potassium intake, banana man is building a banana fort. He wants a cylindrical fort with a diameter of 6ft and a height of 3ft.

Using the formula for the area of a cylinder, $V=\pi r^2 h$, find the volume of his banana fort.