

Functions & Trig Period 1

21 November 2013

Dear Mrs. Prior,

We think it's a great idea to have coffee available for the teachers. We believe that getting the dunkins donuts coffee would be the better choice. The Dunkin Donuts coffee allows 10 small cups of coffee and because there are 15 teachers in total and a few don't drink coffee 10 small cups will be the right amount for the departments.

Amy Marie Prior 1/11/14 6:20 AM

Comment: capitalize

Amy Marie Prior 1/11/14 6:21 AM

Comment: small

Amy Marie Prior 1/11/14 6:21 AM

Comment: department

The smallest box of Keurig K cups has a total of 80 cups which is too much for the math department since they won't be sharing with other departments. You can save the extras but its nicer to have freshly brewed coffee everyday. The 80 K cups cost \$62.00, compared to one full box of coffee from Dunkin Donuts (10 cups) that costs \$9.90. The Keurig brewer itself cost \$249.95 which is a lot considering that Dunkin Donuts does not have a delivery fee for the coffee. ¹Box of coffee from Dunkin Donuts is 100 fl oz. For the Keurig 1 K-Cup of coffee has 10 fl oz. We calculated that for one cup of coffee from Dunkin Donuts it costs \$0.99. For the Keurig, one cup of coffee costs \$0.775. Because the Keurig has such a big initial fee of \$249.95 and that the department will drink the whole box of Dunkin Donuts coffee, the Dunkin Donuts will be the better choice. Even though the cost of one cup of Dunkin Donuts coffee is \$0.99, \$0.23 more than the cost per cup of keurig coffee it is still a better idea for the department to use Dunkin Donuts with no delivery fee and no initial price of a machine for \$249.95.

Amy Marie Prior 1/11/14 6:21 AM

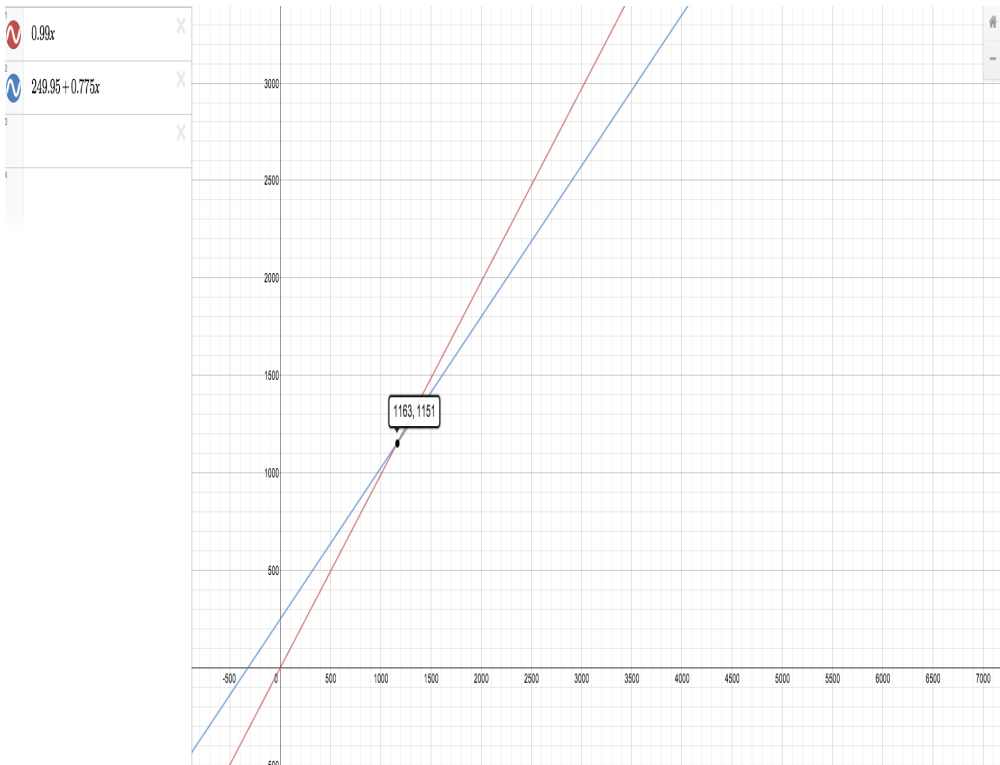
Comment: Write "One" when starting a sentence

Amy Marie Prior 1/11/14 6:22 AM

Comment: comma needed

Amy Marie Prior 1/11/14 6:26 AM

Comment: You provide a lot of good information here, but I'm not convinced that it supports your conclusion.



This graph shows the two equations for the different brands of coffee Keurig and Dunkin Donuts coffee. The Keurig equation is $y=249.95+0.775x$ where y is the total cost and x is the number of cups of coffee. The equation for Dunkin Donuts coffee is $y=0.99x$ where y is the total cost and x is the number of cups of coffee. The points where the two lines meet is (1163,1151) that means that once 1163 coffees have been consumed by the teachers both brands cost the same amount. If the teachers drink more than 1163 cups of coffee the Keurig will be cheaper but if they drink less than 1163 cups the dunkin donuts coffee is cheaper.

Amy Marie Prior 1/11/14 6:39 AM
Comment: You have some good reasoning, but there is a disconnect between what you wrote above the graph and what you wrote below.

The Dunkin Donuts will be the better choice because its fresh each day and will be

Amy Marie Prior 1/11/14 6:25 AM
Comment: You are thinking realistically-good

cheaper since there are a few teachers that don't drink coffee and its not likely that the math department will drink more than 1163 cups of coffee over the course of 180 days.

Amy Marie Prior 1/11/14 6:23 AM

Comment: But are you sure? Can you provide mathematical evidence to back up this statement?