1. The Puppet Master is a Hong Kong based manufacturer of plush hand puppets. They sell their puppets wholesale to stores like WalMart, Target, and Toys-R-Us, as well as smaller toy stores around the world. They only sell their puppets in large variety packs that include 1000 puppets, with a 5000 puppet minimum order. Last year their factory worked non-stop to make 10 million puppets. This year the demand looks to be even more (WalMart wants to increase the size of their previous order), but their factory cannot increase production without adding a new factory, which it is unwilling to invest in at this time.

    Let C(p) represent the cost The Puppet Master charges for p puppets.

    a. Circle those numbers below that belong to Dom(C). Explain why you excluded the others, if any.

    100,000   1,000 $2*10^5$ $2*10^7$ 101,000   0

    b. Dom(C) = _____

2. Mr. Kikuchi, your Algebra teacher, wants to administer the Bouncy Ball lesson that is included in the Common Core Algebra I lesson on scatter plots. In this lesson one student drops a ball from various heights between 4 and 7 ft. and a second student records how high the ball bounces on its first bounce after hitting the floor and records the values in a table. The results of the Bouncy Ball experiment from a single group are given below.

Release height, h, in feet	Bounce height, B(h), in feet
4.0	2.9
4.5	3.2
5.0	3.5
5.5	4.1
6.0	4.4
6.5	4.9
7.0	5.1

    Find the Domain for B in context. Dom(B) = _____

3. Pop's Coffee Stand sells coffee by the ounce as determined by C(x) = .25x + .50, where the units for x are ounces and the units for C are dollars. Pop is willing to sell you as little coffee as you like (he still gets 50 cents for the cup) or as much as you like (the cups are free after the first one), as long as it's not more than his oversized espresso machine can hold, which is 128 oz.

Find the domain in context for C. Dom(C) = _____

4. The Raindrop Streaming Video Company has a rewards program for its members.
   - When you initially sign-up to be a member, you automatically earn 100 points.
   - For each movie that you watch you earn 5 points.

The number of points you earn, $P(m)$, is a function of the number of movies, m, that you watch. However, your parents set a rule that you can watch at most 20 movies each month

a) Find the Domain for P in context. Dom(P) = _____

b) Are the following numbers included in the **range** of $P(m)$? Circle "Yes" or "No" and provide a justification for all that you circled "no." (Hint: Range here would be the points earned.)

	Is the given value included in the range of P(m)?		If you indicated "No" provide a justification.
0	Yes	No	
5	Yes	No	
20	Yes	No	
100	Yes	No	
130	Yes	No	
146	Yes	No	
200	Yes	No	
250	Yes	No	