Group Names and Student Numbers:

1._____   2._____   3._____

  _____   _____   _____

There is a special paint store with only one size of bucket that will sell exact amounts of paint, meaning they will partially fill a bucket to your exact specifications (for example, you could buy 1.34L of paint, or 1.345623L of paint). Each bucket can hold a maximum of 5L (L = litres) and costs $6.00, while the paint costs $10.00 per litre. (Assume we are only buying one colour of paint, and that there is a large fine for not using all of our paint, so that we always want to buy the exact amount of paint and no extra.)

Task 1: Draw a graph that represents the minimum cost for 0L up to 12L.

Use limit notation to describe the behaviour of the paint cost function you drew at 5L, 2L and 0L.

Task 2: Suppose the store also offers full, sealed buckets of exactly 5L of paint for a special price of $40 (since they do not require the careful filling time of the partial buckets), but you can still purchase partially-filled buckets as well at the same prices as before. Draw a graph for the same range of 0L to 12L.