3. [17 points]
   a. [4 points] Circle all graphs in which the graphed function appears to be periodic with more than one period shown.

   ![Graphs](image1.png)

   ![Graphs](image2.png)

   ![Graphs](image3.png)

   ![Graphs](image4.png)

   b. [2 points] Find the period of the function in the following graph:

   ![Graph](image5.png)

   The period is ____________.

   c. [5 points] Find the midline and amplitude of the function graphed in b.

   The midline is ____________.

   The amplitude is ____________.

For parts d. and e. suppose \( C(t) \) is the total number of calls received by a call center \( t \) hours after 8:00am on a normal day. Each sentence describes the number of calls the center receives on a particular day; circle the expression that corresponds to the given description.

   d. [3 points] “The call center received 20 more calls than normal right at the beginning of the day, but otherwise it was a normal day.”

   \[ C(t) + 20 \quad C(t + 20) \quad 20C(t) \quad C(20t) \quad \text{None of these} \]

   e. [3 points] “The center was closed until noon, and at all times during the afternoon the call volume was twice what it normally would have been 4 hours earlier.”

   \[ 2C(t + 4) \quad C(2t + 8) \quad C(2t + 4) \quad 2C(t - 4) \quad \text{None of these} \]