Answers

**Algebra**

**Unit 3 Line Master 4f**

1. The user is asked to enter the diameter of the container,   
the label height, and the number of labels they want printed.

2. Once completed, the application will calculate and display the design cost, printing cost, subtotal, tax, and total.

3. a) The cost per square centimetre to design a label;   
 $1.50 per square centimetre

b) The cost per label to print the labels;   
 $0.002, or 0.2¢ per label.

Graphical user interface, text, application, chat or text message

Description automatically generated4. a)

Graphical user interface, text, application, chat or text message

Description automatically generated b)

5. a) subprogram calculateSubtotal

subtotal = DesignCost + PrintCost

b) subprogram calculateTotal

**Total** = **subtotal** + **HSTAmount**

Answers (cont’d)

**Algebra**

**Unit 3 Line Master 4g**

**Extensions:**

Sample answers:

* I decided to make the rate per label $0.0015 (0.15¢)   
  for orders between 500 and 999 labels and $0.001 (0.1¢)   
  for orders of 1000 or more labels. This is how I changed   
  the subprogram that calculates the print cost:  
  Graphical user interface

  Description automatically generated
* I added a block to the end of each of the subtotal and   
  HST amount subprograms.   
  One new block multiplies the subtotal variable by 100,   
  rounds it, then divides by 100.  
  One new block multiplies the HSTAmount variable by 100, rounds it, then divides by 100.  
  Because the total is calculated by adding these two variables, it will also be calculated to 2 decimal places.

Answers (cont’d)

**Algebra**

**Unit 3 Line Master 4h**

The subprograms look like this:

Graphical user interface

Description automatically generated