1. Dominique Ansel bakery sells truffles. Abby wants to buy 18 truffles. She can either buy one small heart-shaped package, one single truffle, and one large basket of 10 truffles or she can buy two small heart-shaped packages and 4 single truffles. How many truffles are in a small heart-shaped package?

   a. Define a variable to represent this situation.
      \[ h = \text{# of truffles in the heart-shaped package.} \]

   b. Write an equation to represent this situation.
      \[ h + 1 + 10 = 2h + 4 \]

   c. Solve your equation and write your answer in a full sentence.
      \[
      \begin{align*}
      h + 11 & = 2h + 4 \\
      -h & \quad -h \\
      11 & = h + 4 \\
      -4 & \quad -4 \\
      7 & = h
      \end{align*}
      \]
      Each heart-shaped package has 7 truffles in it.

2. At an amusement park, Teddy can go on three rides and have $16 left over or he can go on 6 rides and have $4 left over. Each ride costs the same amount of money.

   a. Write an equation to represent this situation. Remember to define your variable.
      \[ r = \text{cost per ride.} \]
      \[ 3r + 16 = 6r + 4 \]

   b. Solve your equation to find out how much it costs to go on one ride.
      \[
      \begin{align*}
      3r + 16 & = 6r + 4 \\
      -3r & \quad -3r \\
      16 & = 3r + 4 \\
      -4 & \quad -4 \\
      12 & = 3r \\
      4 \frac{2}{3} & = 3r \\
      \underline{r = 4} \\
      \end{align*}
      \]

   c. How much money does teddy have to spend at the park?
      \[
      \begin{align*}
      3(4) + 16 & = 24 + 4 \\
      12 + 16 & = 24 + 4 \\
      28 & = 28 \checkmark
      \end{align*}
      \]
      Teddy has $28 to spend at the park.

3. Ms. James is thinking of a number. Two times the quantity of twice the number plus four is equal to that number minus four. What number is Ms. James thinking of?

   a. Write an equation to represent this situation.
      \[ 2(2x + 4) = x - 4 \]

   b. Solve your equation and write your answer in a full sentence.
      \[
      \begin{align*}
      4x + 8 & = x - 4 \\
      -x & \quad -x \\
      3x + 8 & = -4 \\
      -8 & \quad -8 \\
      3x & = -12 \\
      3 & \quad 3 \\
      x = -4 \checkmark
      \end{align*}
      \]