# tutorified

## Writing and Defining Expressions

1. Write an expression for each problem. Define a variable if you use one.
   a. A piece of ribbon is 20 cm long. Emerald cut it into 4 pieces to do her 4 sister's hair
   b. Emily bought some ice cream cones which cost $24. She paid $30.
   c. Margaret has 15 yards of fabric and she is making dresses for *p* dolls.
   d. In Megan's sewing kit, there are 5 bundles of thread. Each bundle has *t* feet of thread.
   e. The beach is 18 miles farther than the park *p*.
   f. Olivia had 14 needles in her sewing kit but she lost *n* needles.
   g. After a $10 discount, Emma paid $*m* for her new sewing machine.

   Solution:
   a.
   b.
   c.
   d.
   e.
   f.
   g.

2. Define a variable and explain what it represents. Use the variable to write an expression for each problem.
   a. A roll of ribbon is *g* inches long. There are 6 colors of ribbons. Amelia used 2 inches from each roll.
   b. Kim bought 2 bottles of water, 500ml each. After Kim and her sister drank *z* ml from the bottles, they have a total of 350ml of water left.
   c. Angela shared a cab with her friends. They evenly divided the $*j* fare among the three of them. Angel also paid a $5 tip. How much did Angela pay in total?
   d. Sunny earns $12 per hour delivering cakes. She worked for *t* hours this week. Unfortunately, she was charged $15 for a late delivery on Tuesday.
   e. Sarah received $55 for her birthday. She used some of that money to buy 3 shirts priced $*m* each.

   Solution:
   a.
   b.
   c.
   d.
   e.

3. Four friends evenly divided up an *n*-slice pizza. One of the friends, Harris, ate 1 fewer slice than he receive. How many slices of pizza did Harris eat?

   Solution:

4. A large pizza costs $18. Each topping you add on costs $1.50. How much would it cost to get a large cheese pizza with *c* toppings added?

   Solution:

5. Liam had $250. Then, he and his classmates bought a present for their teacher, evenly splitting the $*p* cost among the 24 of them. How much money does Liam have left?

   Solution:

1.
   a. $\dfrac{20}{4}$
   b. $30 - 24$
   c. $\dfrac{15}{p}$ where p = number of dolls
   d. $5 \times t$ where t = length of each thread
   e. $18 + p$ where p = distance to the park
   f. $14 - n$ where n = number of lost needles
   g. $10 + m$ where m = original price of sewing machine

2.
   a. $6 \times (g - 2)$ where g = length for each color of ribbons
   b. $(2 \times 500) - z$ where z = amount of water Kim and her sister drank
   c. $\dfrac{j}{3} + 5$ where j = total amount of fare
   d. $12t - 15$ where t = total hours Sunny worked for the week
   e. $55 - 3m$ where m = price of each shirt

3. $\dfrac{n}{4} - 1$

4. $18 + 1.50c$

5. $250 - \dfrac{p}{24}$