

Problem Solving: Draw a Picture and Write an Equation

A jeweler has a strand of gold wire that is $1\frac{3}{8}$ inches. He cuts $\frac{3}{4}$ of an inch of wire to make a loop. How long is the remaining piece of wire?

Read and Understand

What do you know?

The length of the wire is $1\frac{3}{8}$ inches.

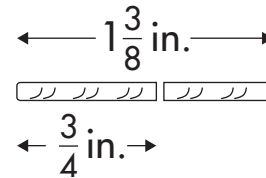
The length he cuts off is $\frac{3}{4}$ of an inch.

What are you trying to find?

The length of the wire that is left over.

Plan and Solve

Draw a picture for what you know.



Write an equation.

$$1\frac{3}{8} - \frac{3}{4} = x$$

Let x = the length of wire left over.

Solve the problem.

$$1\frac{3}{8} - \frac{6}{8} = \frac{11}{8} - \frac{6}{8} = \frac{5}{8}$$

Write the answer in a sentence.

The remaining wire is $\frac{5}{8}$ inch long.

Look Back and Check

Is your answer correct?

$$\text{Yes, } \frac{3}{4} + \frac{5}{8} = \frac{6}{8} + \frac{5}{8} = \frac{11}{8} = 1\frac{3}{8}$$

From his house, Jason rode his bike $1\frac{1}{3}$ miles to the post office.

He then rode in the same direction to the park, which is $\frac{1}{4}$ of a mile from the post office. How far did Jason ride?

- To the right, draw a picture to represent the problem to be solved. Let x = the distance Jason rode from his house to the park.

- Write an equation that represents this distance. Then solve for x .

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Draw a picture and write an equation. Then solve.

- Mr. Flanders drives $1\frac{2}{3}$ miles to school and $1\frac{2}{3}$ miles home each day. He also drives an extra $2\frac{2}{7}$ miles to go to the gym. How many miles does he drive in one day?

- Alison is making a 16-inch necklace. The first $4\frac{1}{4}$ inches are filled with red beads and $8\frac{3}{8}$ inches are filled with blue beads. The rest has white beads. How many inches are filled with white beads?

- Stewart draws a triangle, and each side is $2\frac{1}{6}$ inches long. Judith draws a square, and each side is $1\frac{5}{8}$ inches long. Which figure has the greater perimeter, the triangle or the square?

- Cristoff practices playing his guitar for $1\frac{1}{2}$ hours each weekday. He practices this amount of time plus an additional $1\frac{1}{2}$ hours on Sundays. Let x = the number of hours Cristoff practices on Sundays. Draw a picture and write an equation and solve to find the number of hours he practices on Sundays.

- Which of these fractions, when added to $2\frac{1}{3}$, will give you a sum greater than six?
A $3\frac{1}{2}$ **B** $3\frac{5}{12}$ **C** $3\frac{7}{12}$ **D** $3\frac{3}{4}$
- Dennis says that $1\frac{1}{2}$, $1\frac{2}{4}$, and $1\frac{3}{6}$ are all equivalent. Is he correct? Draw a picture and explain your answer.

