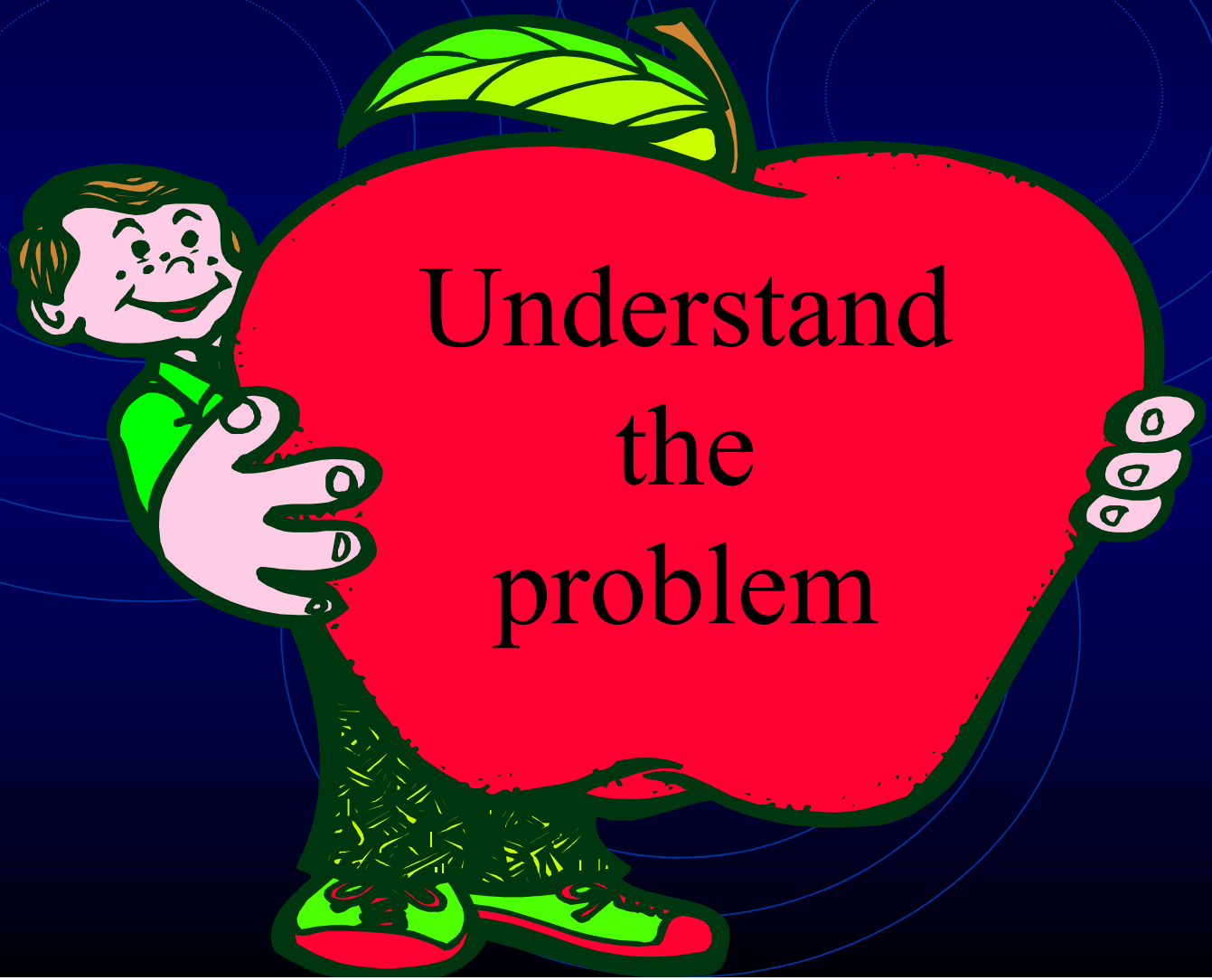
Problem Solving
Draw a Diagram

by Monica Yuskaitis

Problem Solving is easy if you follow these steps



Step 1 – Understand the problem

- Read the problem carefully.
- Find the important information.
- Write down the numbers.
- Identify what the problem wants you to solve.
- Ask if your answer is going to be a larger or smaller number compared to what you already know.

Step 1 - Understand the Problem

Read the problem carefully.

- A Girl Scout troop went on a hike. First they walked 1 mile east, then 2 miles south, then 3 miles west, and 1 mile north, then 2 miles east. How far is the troop from their starting point?

Step 1 - Understand the Problem

Find the important information.

- A Girl Scout troop went on a hike. First they walked 1 mile east, then 2 miles south, then 3 miles west, and 1 mile north, then 2 miles east. How far is the troop from their starting point?

Step 1 - Understand the Problem

Write down the key information.

- A Girl Scout troop went on a hike. First they walked 1 mile east, then 2 miles south, then 3 miles west, and 1 mile north, then 2 miles east. How far is the troop from their starting point?

Step 1 - Understand the Problem

Write down the key information.

1 mile east,

2 miles south,

3 miles west,

1 mile north,

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Step 1 - Understand the Problem

Identify what the problem wants you to solve.

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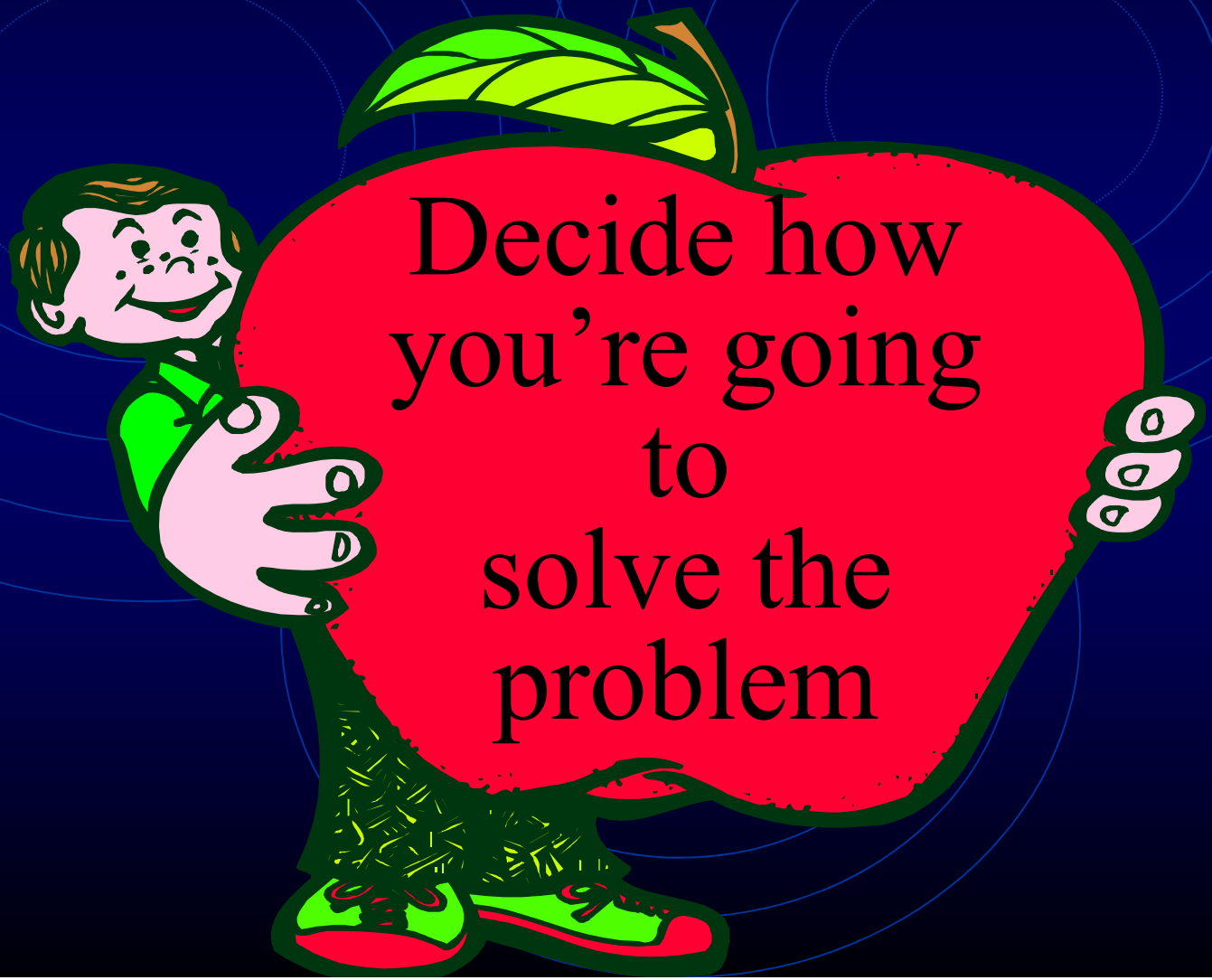


Step 2 - Decide how you're going to solve the problem

Choose a method

Use a graph

Write an equation

Find a pattern

Use reasoning

Make a table

Use formulas

Make a list

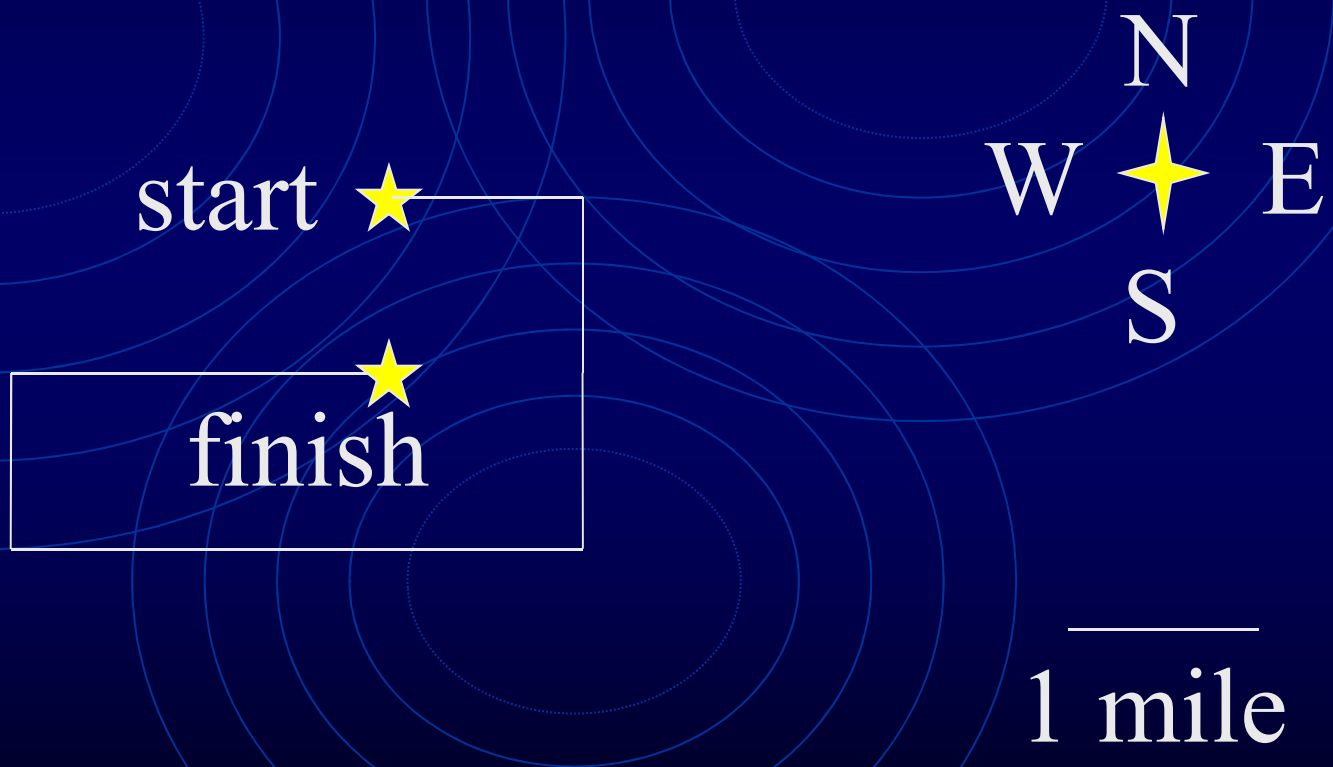
Work backwards

Draw a diagram

Act it out

Step 2 - Decide how you're going to solve the problem

Make your diagram



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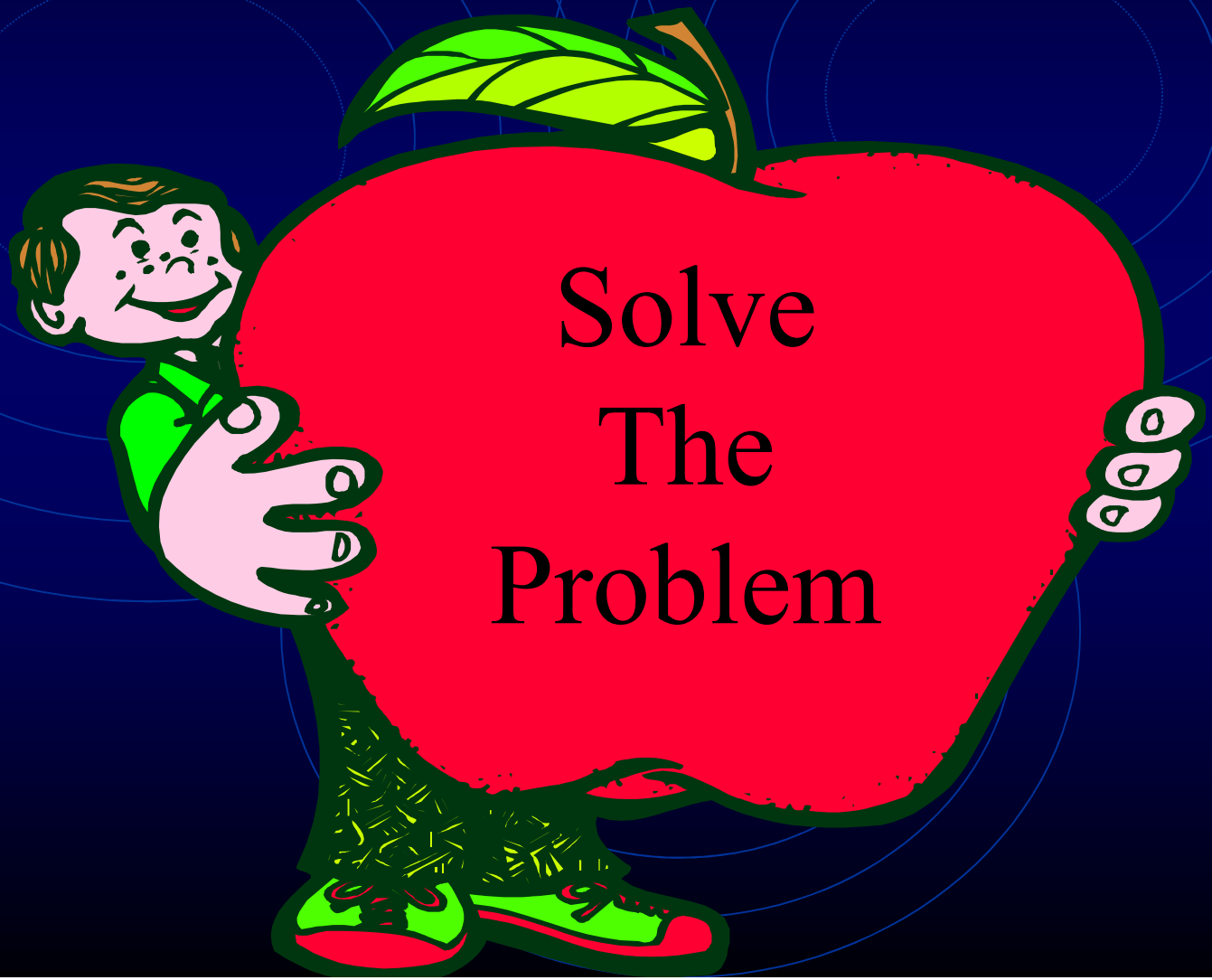
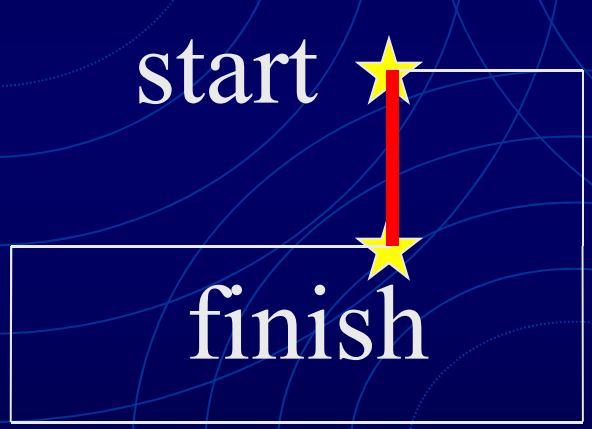


Step 3 - Solve the problem

Measure the distance between the start and the finish & compare it to the mile.



Problem Solving is easy if you follow these steps

Step 4 - Look Back & Check

Reread the problem

- A Girl Scout troop went on a hike. First they walked 1 mile east, then 2 miles south, then 3 miles west, and 1 mile north, then 2 miles east.

How far is the troop from their starting point?

Step 4 - Look Back & Check

Compare the information from the problem to your work.

1 mile east,

2 miles south,

3 miles west,

1 mile north,

2 miles east

Step 4 - Look Back & Check

Did you solve what the problem asked you to solve?

How far is the troop from their starting point?

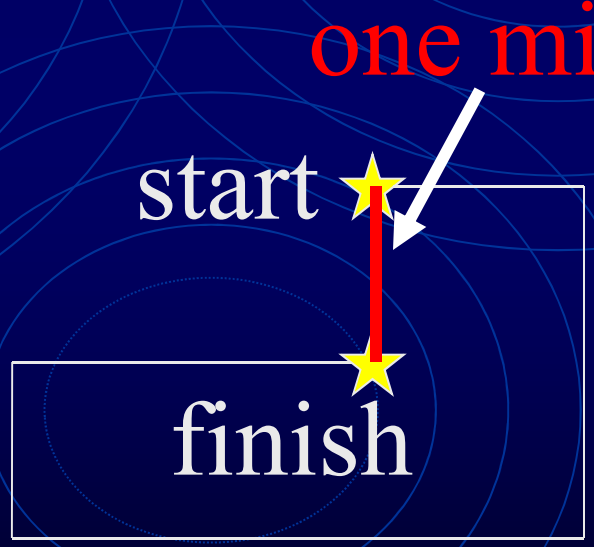
1 mile east,

2 miles south,

3 miles west,

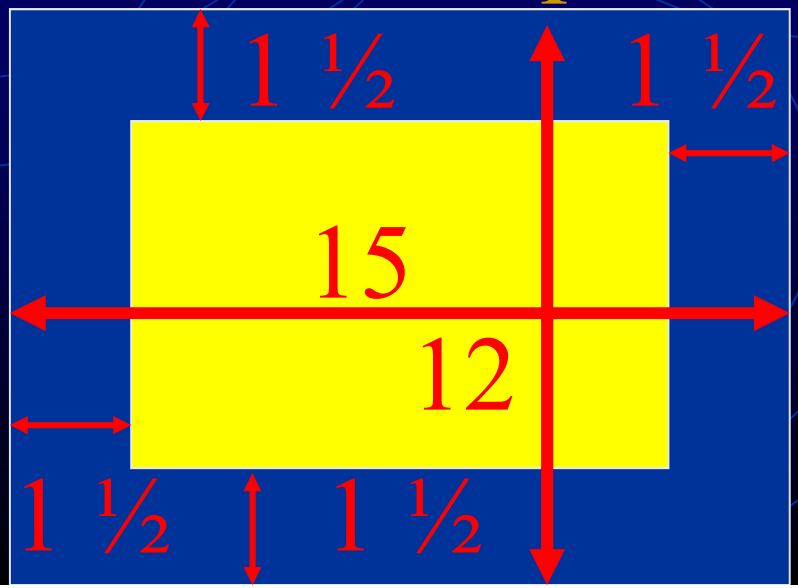
1 mile north,

2 miles east

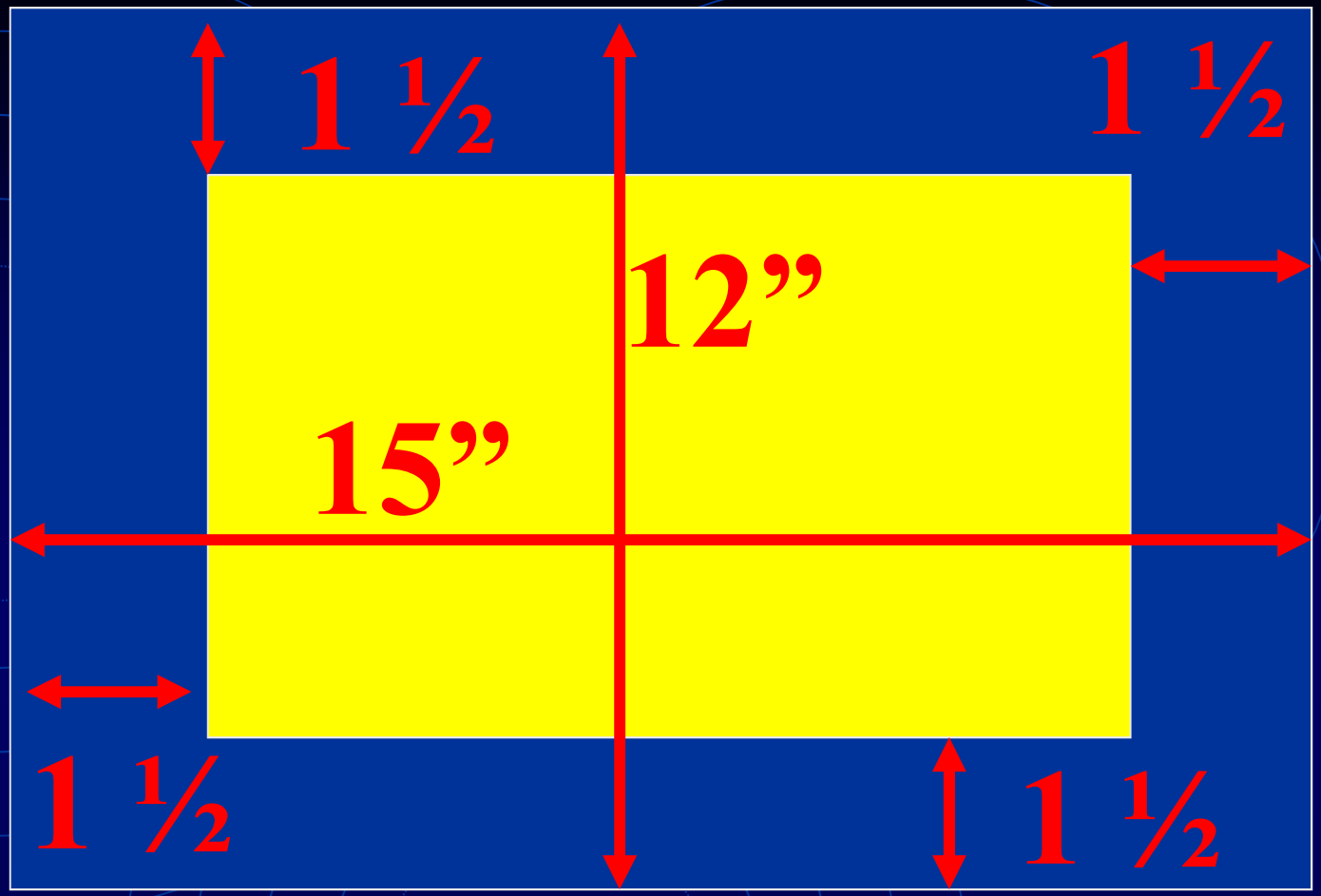


Draw a diagram to solve this problem.

- A picture frame with a photo is 15 inches wide and 12 inches high. A mat around the photo is 1 ½ inches wide on all sides. What are the dimensions of the photo?

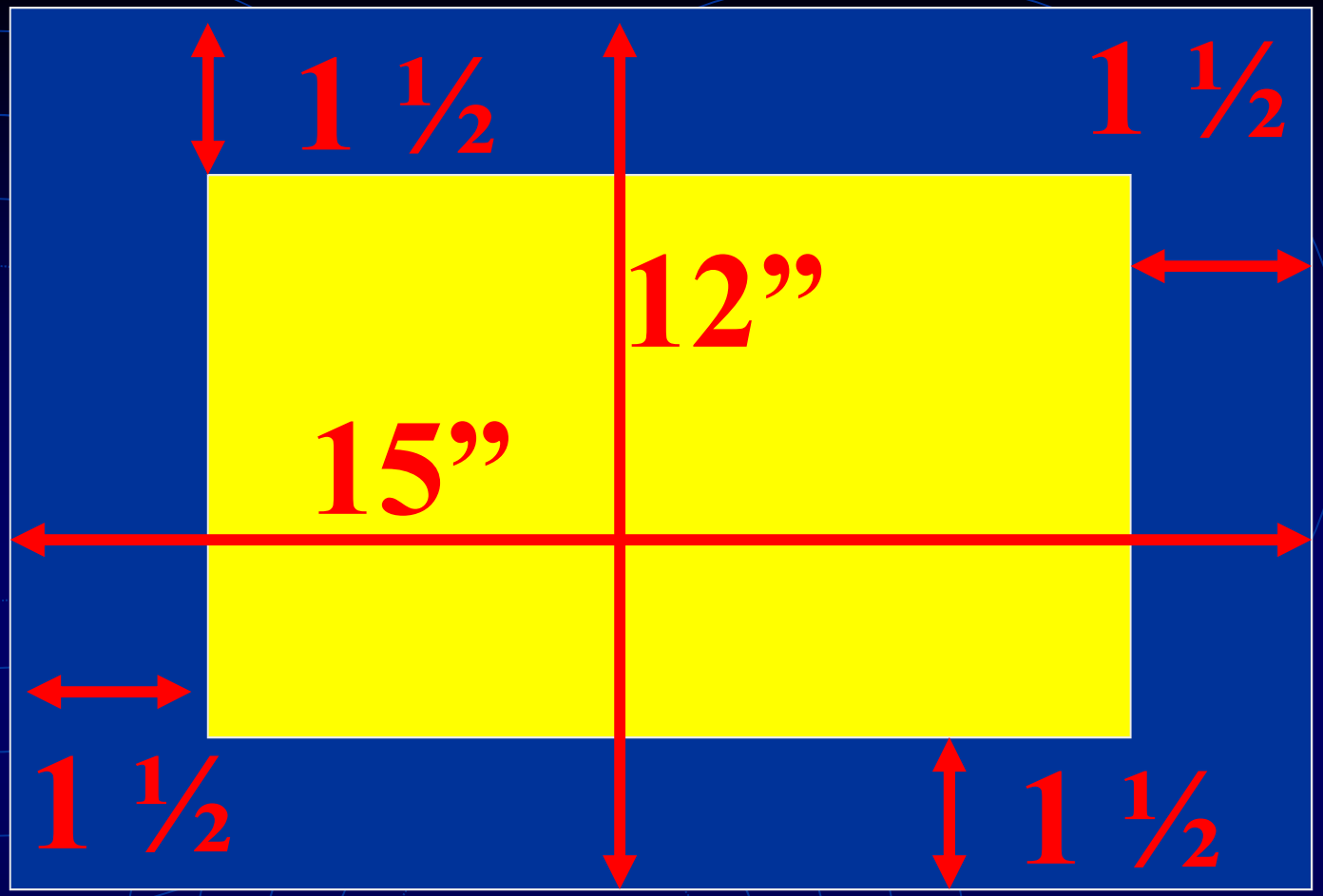


$$\begin{array}{r} 1\ \tfrac{1}{2} \\ +\ 1\ \tfrac{1}{2} \\ \hline 2\ \ 2/2 \end{array}$$

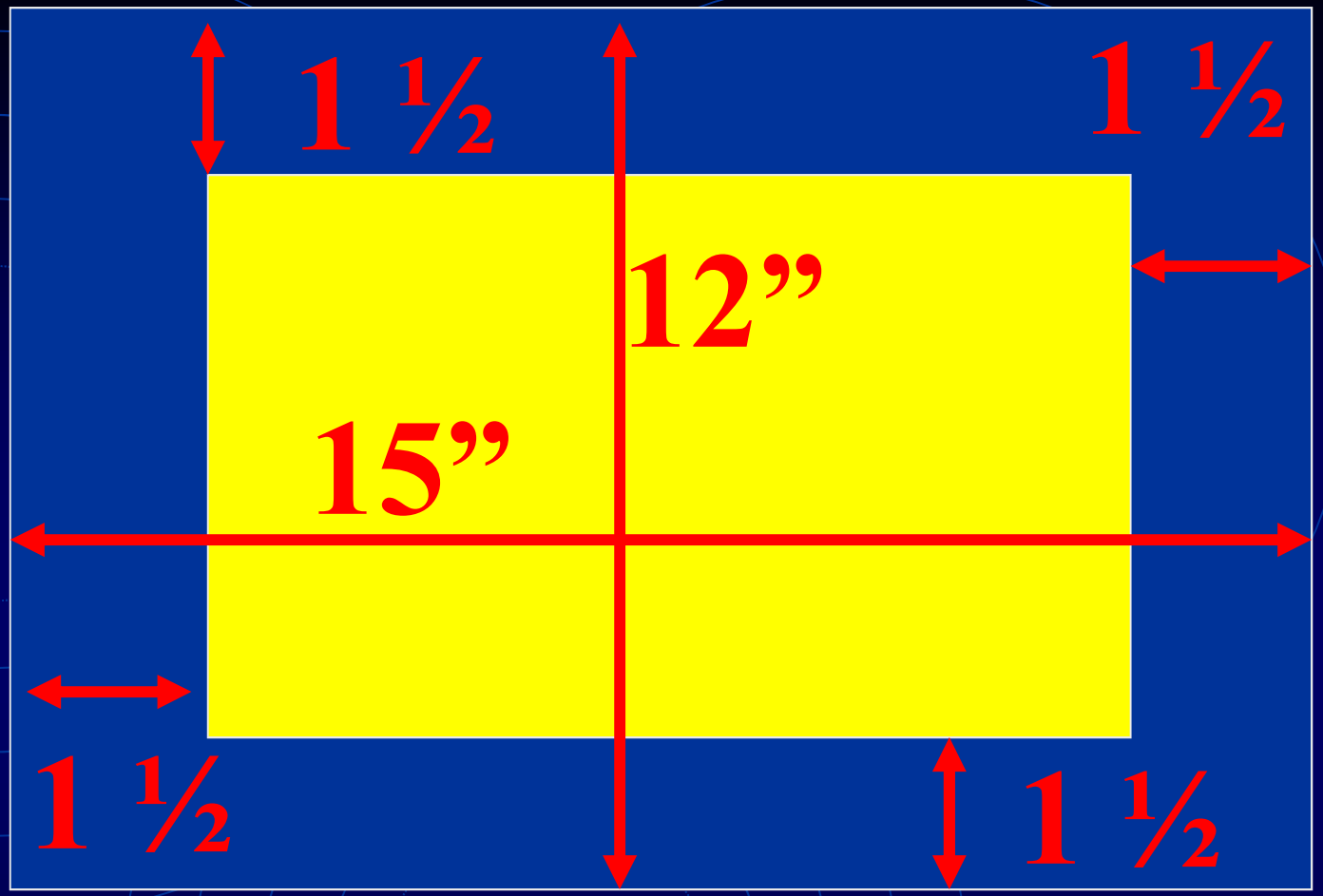


Step 1 – Add the two mat edges together.
Step 2 – Convert the 2/2 into 1 and add this to the whole number 2.

$$\begin{array}{r} 1 \\ 1\ \tfrac{1}{2} \\ +\ 1\ \tfrac{1}{2} \\ \hline 3 \end{array}$$

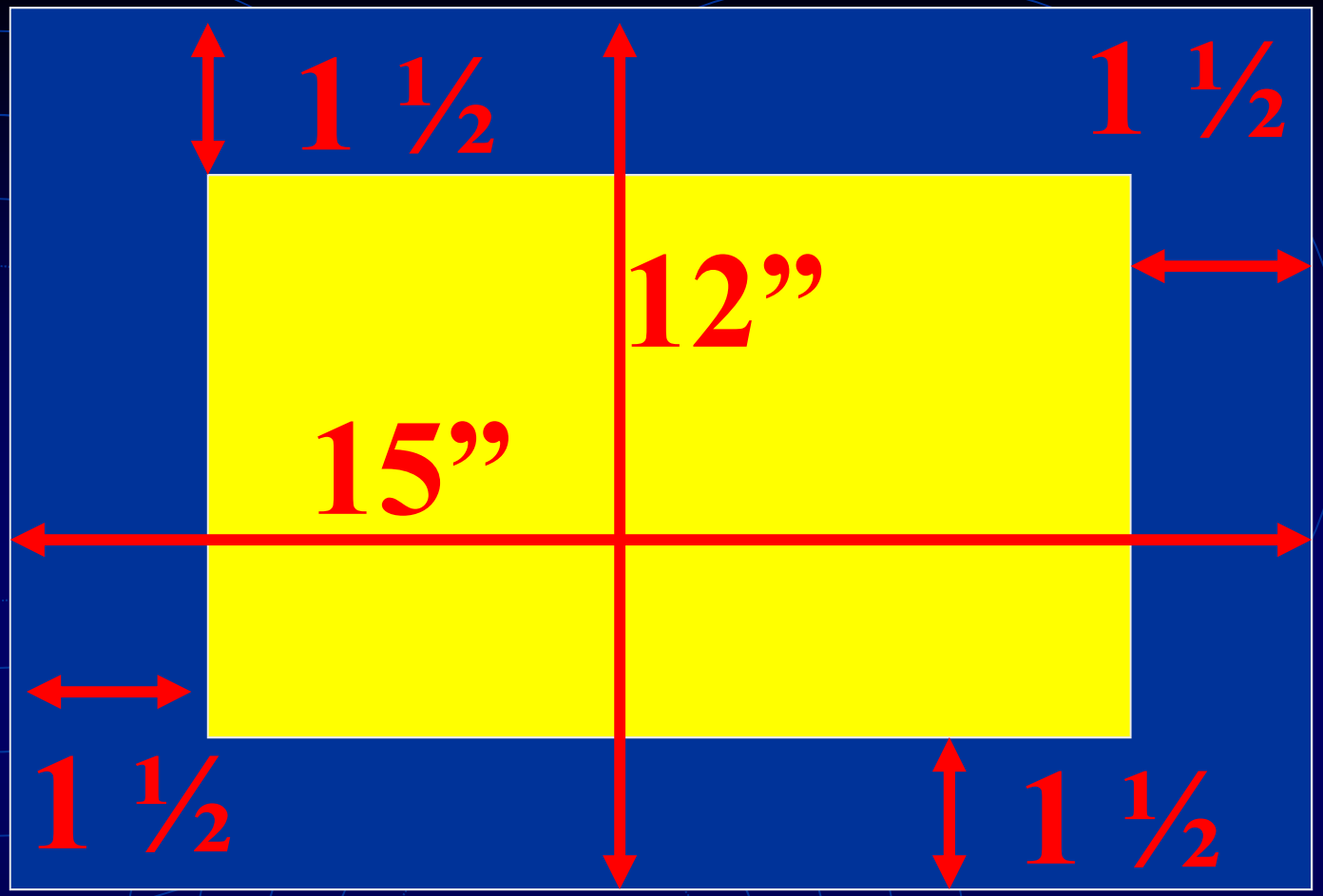


Step 2 – Convert the 2/2 into 1 and add this to the whole number 2.



$$\begin{array}{r} 15 \\ -\ \ 3 \\ \hline 12 \end{array}$$

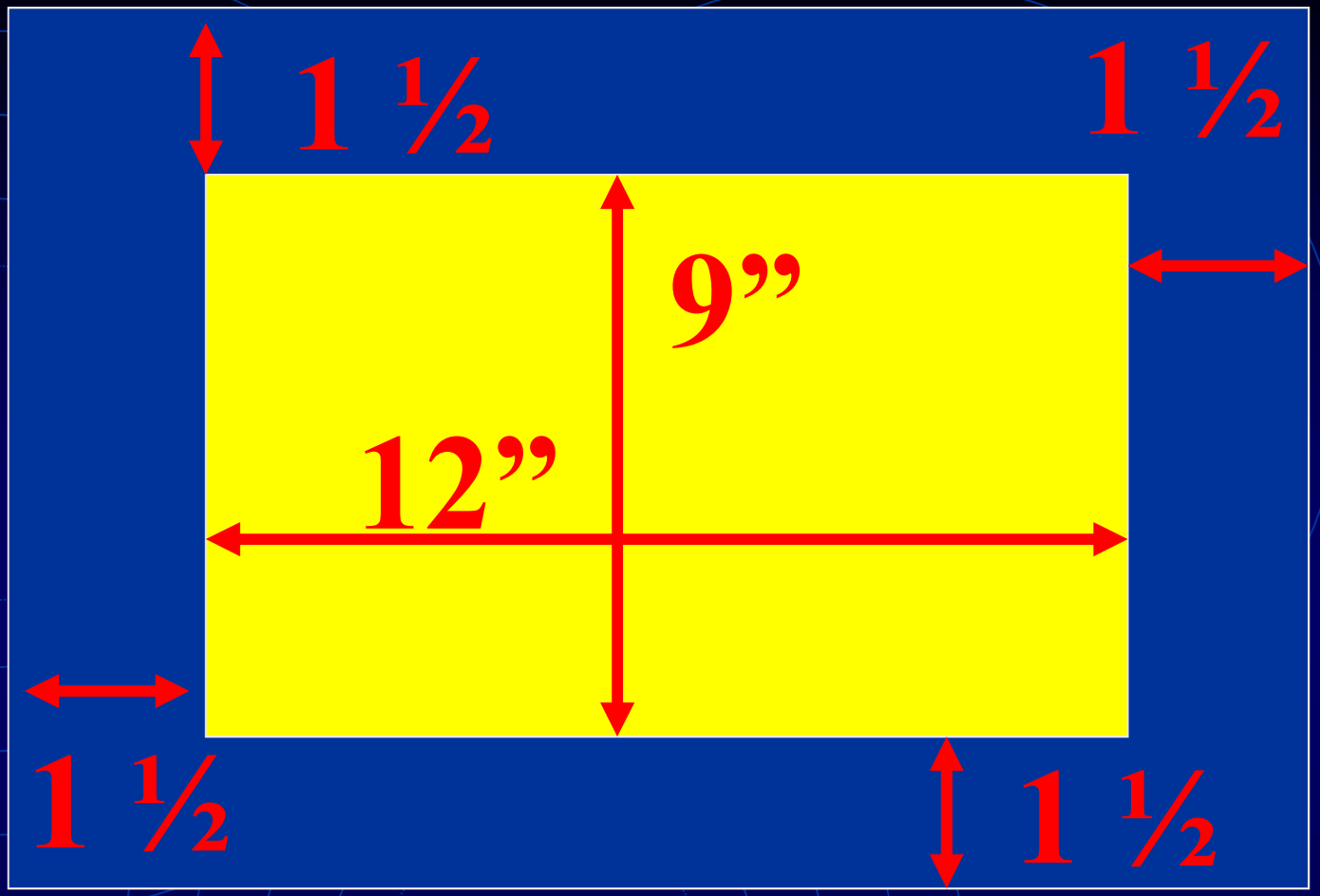
Step 3 – To get the width of the photo subtract the 3 from 15.



$$\begin{array}{r} 12 \\ -\ \ 3 \\ \hline 9 \end{array}$$

Step 4 – To get the height of the photo subtract the 3 from 12.

$$\begin{array}{r} 12 \\ +\ 3 \\ \hline 15 \\ \\ 9 \\ +\ 3 \\ \hline 12 \end{array}$$



Step 5 – Your photo size is 12 x 9 inches. To check your work, add 2 times the mat width to each of your new measurements.

Draw a diagram to solve this problem.

- The Zunigas, Estoleros, Leys, Penas and Rices all live on the same road in a row. The Estoleros live in the middle house. The Penas live in the first house. The Leys live between the Estoleros and the Zunigas. Who lives in the second house?