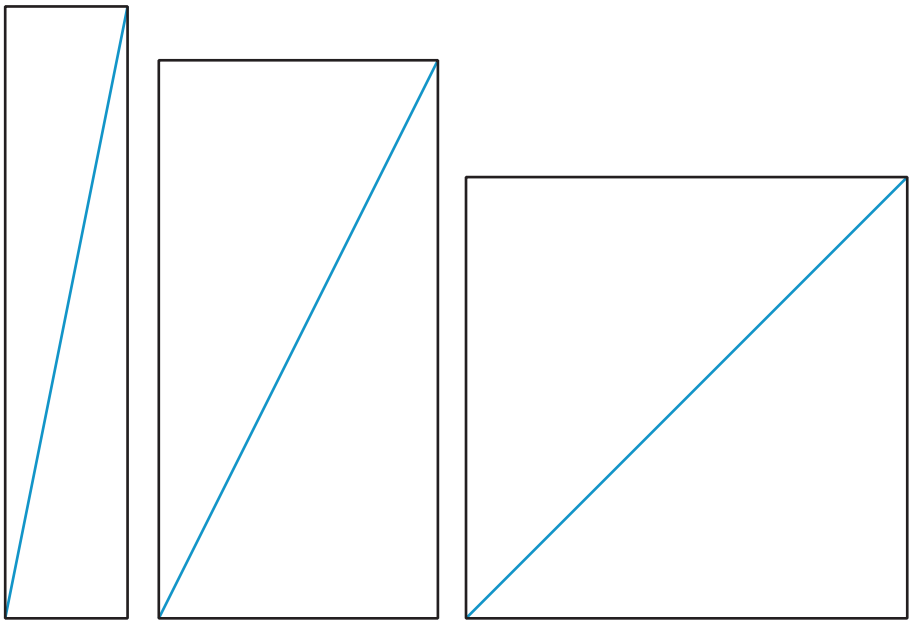
Unit 8, Lesson 15

When Is the Same Size Not the Same Size?

Let's figure out how aspect ratio affects screen area.

15.1 Three Figures

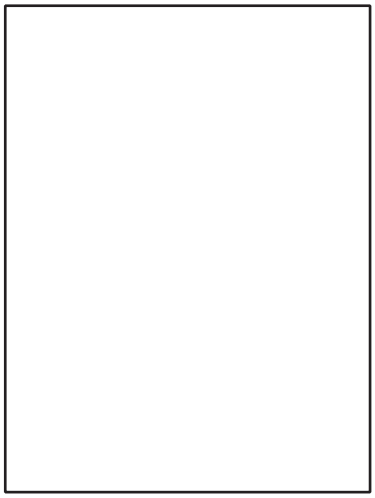
What do you notice? What do you wonder?



15.2 A $4:3$ Rectangle

A typical aspect ratio for photos is $4:3$.

Here's a rectangle with a $4:3$ aspect ratio.



1. What does it mean that the aspect ratio is $4:3$? Mark up the diagram to show what it means.
2. If the shorter side of the rectangle measures 15 inches:
   a. What is the length of the longer side?

   b. What is the length of the rectangle's diagonal?

3. If the diagonal of the $4:3$ rectangle measures 10 inches, how long are its sides?

4. If the diagonal of the $4:3$ rectangle measures 6 inches, how long are its sides?

15.3 The Screen Is the Same Size . . . Or Is It?

Before 2017, a smart phone manufacturer's phones had a diagonal length of 5.8 inches and an aspect ratio of $16 : 9$. In 2017, they released a new phone that also had a 5.8-inch diagonal length, but an aspect ratio of $18.5 : 9$.

Some customers complained that the new phones had a smaller screen. Were they correct? If so, how much smaller was the new screen compared to the old screen?