

What is the aspect ratio? Things to know about aspect ratio

The thing that you interact with the most on a smartphone, tablet, laptop or any computer system whether compact or bulky is definitely the screen.

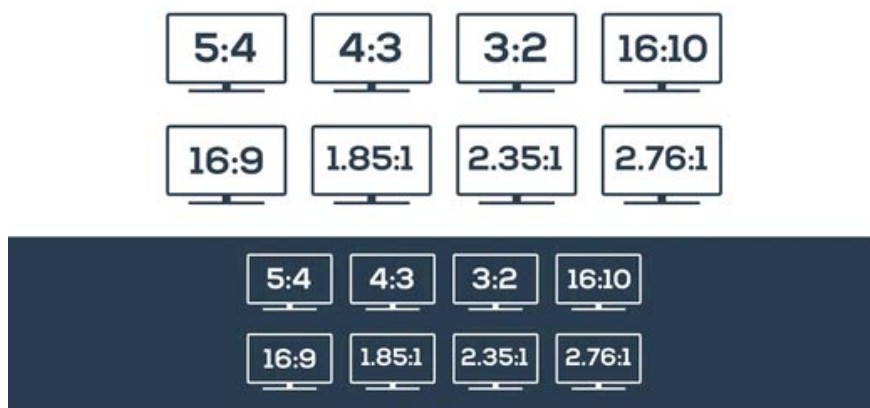
Therefore, factors such as interface, resolution, aspect ratio, display space will play an extremely important role in deciding the user experience.

You must have come across the term 'aspect ratio' or 'display ratio' when buying TVs or technology products with screens. In fact, this term is also used extremely widely in the world of video, photography. And at its core, aspect ratio is a pretty simple mathematical concept.

Aspect Ratio in Video and Photography

By definition, aspect ratio is the ratio between the length and width of a rectangular frame like a TV screen or a photograph. Like any mathematical ratio, a rectangle's aspect ratio refers not to its physical size, but to the correlation between width and length.

For example, a perfect square will have an aspect ratio of 1:1 because the width of the square should be equal to its length. The aspect ratio can be expressed as an integer (like 3:2) or a decimal (like 1.5:1).



Through aspect ratio, you can work out the height of an object by its width (and vice versa). Probably the most commonly used aspect ratio is 16:9, where the first number relates to the width (16) and the second to the height (9).

In film production, aspect ratio refers to the shape of the frame. Two of the most common aspect ratios you'll see in movie theaters are 1.85:1 (widescreen) and 2.39:1. This is why you will see black bars at the top and bottom

of the frame when watching most movies.

TVs have now switched to 16:9 for most broadcast content, although screens can exist in all forms of aspect ratios. For instance, the ultra-wide monitor favored by many gamers may have an aspect ratio of 2.37:1 (usually marketed as '21:9').

Calculate Aspect Ratio

If you want to calculate the fit of a certain display to a particular frame — for example, a smartphone wallpaper — this Andrew Hedges tool can help.

Using this tool, you can calculate the height or width based on the aspect ratio, or even do the reverse to calculate the ratio of a rectangular frame based on the physical size.

Round results to the nearest whole number

Your aspect ratio is: **16 : 9**

Example

For example, to calculate height based on width and aspect ratio, enter your aspect ratio in cells W1 and H1, then add the physical width in cell W2. The calculator will display the relative height in the H2 field.

Round results to the nearest whole number

Your aspect ratio is: **16 : 9**

Example

Basically, you can find out the scale of any given rectangle just by entering the physical dimensions in cells W1 and H1.

When it comes to content like images and videos, skewing the aspect ratio when resizing leads to images. the video is stretched or compressed unnaturally. For best display results, always maintain the right aspect ratio for each specific display content.

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