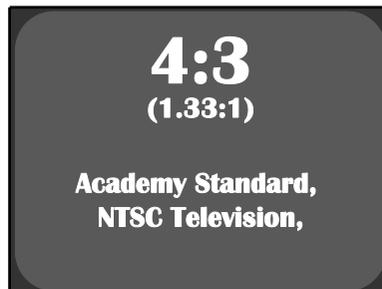


## Aspect Ratio

The *aspect ratio* is the width to height ratio of an image, and is represented by width:height. For example, an image with a 2:1 aspect ratio is two times as wide as it is high. The aspect ratio of an image does not indicate its exact size or resolution. For example, our 2:1 image may be 600 pixels wide by 300 pixels high, or 4 inches by 2 inches, etc. Note: When speaking of a ratio in which the second number is “1”, often only the first number is referred to. For example, the ratio of 1.25:1 may simply be referred to as “1.25”.

**Over the years several common aspect ratios have been used in film and television.** The most prevailing aspect ratio has varied through the years. This section looks at a few of the most common aspect ratios you may encounter.

**Before 1950, the most common aspect ratio was 1.33:1**, known as Academy Standard. This aspect ratio is four units wide by three units tall. It is found on older films and NTSC (non-widescreen) television sets. Almost all of the older films you can think of before 1950 have this aspect ratio, such as *Gone With the Wind*, *Dracula*, *It's a Wonderful Life*, and *The Wizard of Oz*, to name a very few.



**Figure 13.67** Academy Standard. Cinema before 1950 and most televisions before 1990's. Also many home computer screens.



**Figure 13.68** Modern high definition television.

After 1950, films began to appear in a wider format in order to compete with the growing popularity of the television and the subsequent competition with theater viewing. At that time many different wider aspect ratios were developed, but the two most common are 1.85:1 (known as Academy Flat, or simply “Flat”) and 2.35:1 (known as Anamorphic Scope, or simply “Scope”). Later Anamorphic Scope is slightly wider – 2.39:1. In cinema today, Academy Flat is the most prevalent. Some familiar films shot in the Flat aspect ratio include *The English Patient*, *All the President's Men* and *The Birds*. Anamorphic Scope films include *Star Wars*, *Apocalypse Now*, *Blade Runner*, *A Fistful of Dollars*, and *A Few Good Men*.

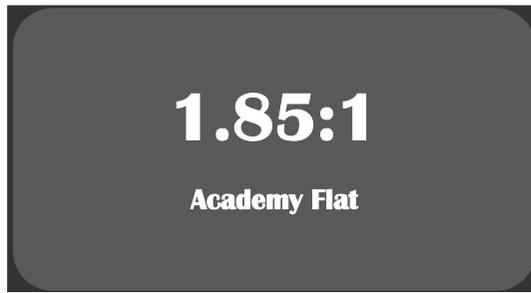


Figure 13.69 Academy Flat. Used for most theatrical showings since 1960.

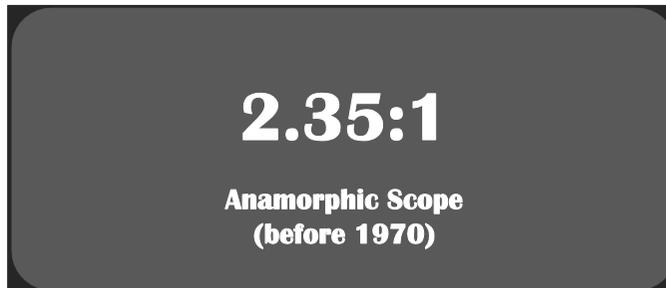


Figure 13.70 Anamorphic Scope before 1970 (CinemaScope and early Panavision).



Figure 13.71 Later Panavision, modern widescreen theater.

**Modern television is usually in a high definition (HDTV), widescreen format, with a ratio of 16:9 (1.78:1).** Notice this is very close to the Flat aspect ratio of 1.85. This is good news for those who like to watch film at home. The older 4:3 television sets have a problem when showing wider format films. Either the film is padded at the top and bottom so that it fits into the frame (known as “letterboxed”), or it is cropped. Some viewers do not like to watch letterboxed films, as the image is effectively smaller. The alternative is to crop the film. If a film is cropped, a great amount of information is lost, and the intent of the scene may be compromised. Often the area of the crop is moved about in order to capture the best area of the original film in an attempt to preserve the film’s intended focus, a process known as “pan and scan”. Better than nothing, but the only way to view a film and maintain its original intent in every shot is to view it in its original format.