# Frame rate

<https://docs.unity3d.com/ScriptReference/Application-targetFrameRate.html>

default targetFrameRate = -1 🡺 indicates that the game should render at the platform's default frame rate. This default rate depends on the platform:  
  
- On standalone platforms the default frame rate is the maximum achievable frame rate.  
  
- On mobile platforms the default frame rate is less than the maximum achievable frame rate due to the need to conserve battery power. Typically on mobile platforms the default frame rate is **30 frames per second**.

- All mobile platforms have a fix cap for their maximum achievable frame rate, that is equal to the refresh rate of the screen (60 Hz = 60 fps, 40 Hz = 40 fps, ...). **[Screen.currentResolution](https://docs.unity3d.com/ScriptReference/Screen-currentResolution.html) contains the screen's refresh rate.**  
  
- Additionally, all mobile platforms can only display frames on a VBlank. Therefore, you should **set the targetFrameRate to either -1, or a value equal to the screen's refresh rate, or the refresh rate divided by an integer.** Otherwise, the resulting frame rate is always lower than targetFrameRate. Note: If you set the targetFrameRate to the refresh rate divided by an integer, the integer division leads to the same effective fps as setting*[QualitySettings.vSyncCount](https://docs.unity3d.com/ScriptReference/QualitySettings-vSyncCount.html) to the same value as that integer. (****not for iOS*** *!!)*  
  
- On WebGL the default value lets the browser choose the frame rate to match its render loop timing which generally produces the smoothest results. Non-default values are only recommended if you want to throttle CPU usage on WebGL.  
  
- When using VR Unity will use the target frame rate specified by the SDK and ignores values specified by the game.

**30 FPS 🡺 real-time means less than 33.33 ms to process a frame!**

Models

<https://github.com/facebookresearch/pycls/blob/master/MODEL_ZOO.md>

check frame rate handling for battery saving :

<https://forum.unity.com/threads/battery-preserving-low-frame-rate-but-with-immediate-new-frame-upon-input.476263/>