```
// Fast Inverse Square Root
float Q_rsqrt( float number )
       long i;
       float x2, y;
       const float threehalfs = 1.5F;
       x2 = number * 0.5F;
       y = number;
       i = * ( long * ) &y; // Evil floating point bit level hacking
       i = 0 \times 5f3759df - (i >> 1); // !What the ...?
       y = * ( float * ) &i;
       y = y * (threehalfs - (x2 * y * y)); // 1st iteration
       y = y * (threehalfs - (x2 * y * y)); // 2nd iteration, this can be removed
       return y;
   Fast Inverse Square Root
                                  float Q rsqrt ( float number )
   master branch, last modified yesterday
                                         long i;
                                         float x_2, y;
                                          const float threehalfs = 1.5_{\rm F};
                                         x_2 = number * 0.5<sub>F</sub>;
                                             = number;
    Evil floating point bit level hacking
                                         i = * ( long * ) &y;
                     What the ...?
                                          i = 0 \times 5f3759df - (i >> 1);
                                         y = * ( float * ) &i;
                     1st iteration
                                         y = y * (threehalfs - (x_2 * y * y));
     2<sup>nd</sup> iteration, this can be removed
                                         y = y * (threehalfs - (x<sub>2</sub> * y * y));
                                         return y;
```